

HAZARDOUS WASTE MANAGEMENT

HEARING

BEFORE THE

SUBCOMMITTEE ON NATURAL RESOURCES,
AGRICULTURE RESEARCH AND ENVIRONMENT

OF THE

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SCIENCE AND TECHNOLOGY
HOUSE OF REPRESENTATIVES

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HAZARDOUS WASTE MANAGEMENT

MONDAY, MAY 16, 1983

HOUSE OF REPRESENTATIVES,
COMMITTEE ON SCIENCE AND TECHNOLOGY,
SUBCOMMITTEE ON NATURAL RESOURCES, AGRICULTURE
RESEARCH AND ENVIRONMENT,
Tallahassee, Fla.

The subcommittee met, pursuant to call, at 9 a.m., in the cabinet meeting room, the Capitol, Tallahassee, Fla., Hon. Don Fuqua (chairman of the committee) presiding.

Present: Representatives Fuqua, MacKay, and Lewis.

Mr. FUQUA. This is a meeting of the Subcommittee on Natural Resources, Agriculture Research and Environment. We are very pleased that two Members of the Florida delegation are members of the subcommittee, Congressman Buddy MacKay and also Congressman Tom Lewis, from Florida—we are very pleased to have them. We hope that Congressman Larry Smith will be able to join us this morning.

But before we start, I would like to thank the witnesses who have generously agreed to take the time today to share with us their knowledge on the subject of hazardous waste disposal. The real and potential problems and the proposed solutions for more effectively dealing with the identification, monitoring, and disposal of hazardous waste. I have already mentioned the two colleagues from Florida who are members both of our subcommittee and the full Committee on Science and Technology.

Each of these distinguished gentlemen has contributed significantly to the work of the Committee on Science and Technology by their appointment to the committee early this year.

The problem of hazardous waste, if not properly addressed, can have significant consequences not only for Florida but for many other areas throughout the Nation.

Our focus in today's hearing is not finding people to blame for hazardous waste generation—in a modern industrial society, hazardous waste will be generated—but, rather, to seek ways to more effectively control its treatment and disposal.

The Federal Government has addressed this problem through creation of the Environmental Protection Agency and through such laws as the Superfund to assist State governments in major cleanups of closed or abandoned dump sites.

State governments in Florida and elsewhere have also made efforts to identify sources of hazardous waste and to assure its proper disposal, as have many units of local government.

The scope of the problem is easily recognized when we realize that the Environmental Protection Agency has identified some 15,000 abandoned or closed hazardous waste dumps nationwide, though only 419 are on a proposed national priority list of cleanup under the Superfund law; 25 of those sites have been identified in Florida.

It should be remembered that the 15,000 dumps are only those that we know about. More are being discovered on a regular basis, but usually not until local citizens call the problem to the Government's attention.

With an additional 41 million tons of hazardous waste generated every year in the Nation, we can readily see that the problem of disposal is increasing drastically.

Those charged with enforcing our environmental laws on the State and national level should be the first to admit that they have neither the trained personnel nor the fiscal resources to create a national hazardous waste police force. Neither would it be desirable to create another bloated bureaucracy to further complicate the task of regulation and enforcement.

Up to this point, hazardous waste enforcement has been primarily a Federal and State responsibility, but the waste itself is created in cities and counties throughout the Nation and it is usually first recognized by individuals and governments where it is generated.

Local government, however, usually has no personnel technically trained to identify hazardous waste generators, nor to work with those who generate it to resolve the problems of disposal.

We hope during this hearing to develop testimony addressing the potential for more effectively involving local government in this task and providing local government with the training and fiscal resources which such a responsibility would require.

Before we begin hearing from our witnesses today, I would like to recognize Congressman Buddy MacKay for any statement that he wishes to make.

Buddy.

Mr. MacKay. Thank you, Mr. Chairman. I think we are at a point in the hazardous waste problem where we have dealt with nationwide the large generator. The large generator of hazardous waste, generally speaking, is in compliance; and now the question is, particularly for a State like the State of Florida, whether we have solved the problem or not.

And I think many of us are coming to the conclusion that the problem has not been solved and that it will not be solved until the small generator, or the small generator of hazardous waste becomes aware of his responsibilities under the law and until local government is actively involved in dealing with the small generator.

I think what we are finding out that in the State of Florida this will be of use not only here, but will be of use nationwide.

Perhaps we are coming to an awareness of this problem more quickly than other States because water is more critical in the State of Florida. And because our water sources are closer to the surface, the soil is more permeable and the places where the water is closest to the surface happens to be the place where most of the people are.

I believe this hearing will be useful in that it will show examples of the kinds of problems we are getting into, and it will raise the public's level of awareness of that part, or that dimension of the hazardous waste problem which has not yet been addressed.

The proposal to site hazardous waste collection and disposal facilities in the State of Florida proves to be very controversial simply because the normal citizen does not want to see a hazardous facility sited in his backyard.

One of the ironies in this is that in the State of Florida, as in every other State, we already have hazardous waste facilities sited in all of our backyards, and those are known as sanitary landfills.

I think that it is going to become apparent in the course of these hearings, and that is, through the small generator exemptions we are actually creating a problem for the next generation. And I think as people become more aware of the fact that hazardous wastes are being disposed of in our sanitary landfills, people are going to begin to look at this whole issue differently.

I am very pleased that your committee has chosen to hold this hearing here. I think it will have significance not only for Florida, but for the rest of the Nation; and I look forward to participating.

Thank you.

Mr. FUQUA. Thank you very much, Buddy, and let me say that it was through your efforts that we are holding these hearings today and your interest in this matter.

As I mentioned earlier, we are also privileged to have another distinguished Floridian, who is very familiar with Tallahassee, having spent several years here in the State senate, Congressman Tom Lewis.

I almost called you senator, Tom.

Mr. LEWIS. Once a senator, always a senator, Mr. Chairman.

Mr. FUQUA. That is what Claude Pepper says.

Mr. LEWIS. Thank you, Mr. Chairman.

Careless management of hazardous waste poses a substantial threat to both public health and the environment, and this threat becomes a reality when hazardous materials, including waste, are released into the land, water, and/or air.

Thus, it has become evident that the proper management of these wastes, whether newly generated or previously disposed of, presents a substantial challenge. Because of potential adverse impacts, it is essential that proper hazardous waste management methods be utilized both in Florida and throughout the Nation.

Sound management not only minimizes but often eliminates the adverse health and environmental consequences. In addition, it makes good economic sense.

The Office of Technology Assessment estimated that 1 ton of hazardous waste is added to the environment for every person in the Nation every year. OTA also estimated that the cost of cleaning up each ton of improperly managed waste is approximately \$2,000.

These costs are likely to increase. The well-known case of Love Canal will illustrate the point. It has been estimated that proper disposal of the waste dump there decades ago would have cost about \$2 million versus the \$36 million for remedial action already spent through 1980.

Ultimate costs for remedial actions are estimated to exceed \$100 million. We do not want any Love Canal in Florida.

The citizens of Florida should not have to pay the price of the environmental damage, nor should they pay the economic costs of cleaning up the consequences of hazardous waste mismanagement.

This hearing is most appropriate in that the witnesses should provide important information on solutions to avoid these problems at the State and local levels.

Mr. Chairman, I want to express my appreciation to today's witnesses for appearing before this subcommittee. I look forward to hearing the testimony. Mr. Chairman, I also appreciate you bringing the subcommittee here to Tallahassee. It further emphasizes your interest in Florida.

I believe it is the second hearing in a month that you have been in Florida with the subcommittee on serious problems in the area.

Thank you, Mr. Chairman.

Mr. FUQUA. Thank you very much, Tom.

The speaker of the house, Lee Moffitt, had originally been scheduled to testify. He was unable to, but he does have a statement. Without objection, the statement of Speaker Moffitt will be inserted into the record at this point.

Senator Peterson also was unable to come, but is Senator Neal present? Senator Kirkpatrick? I didn't think I saw either one of them.

How about Secretary Tschinkel? There she is.

Ms. TSCHINKEL. Do you want to start with me?

Mr. FUQUA. Yes. I think you are well known to this group, Vicki, and I will forego my usual kind introduction to say we are again delighted to have you here.

You have been very cooperative with our committee in many capacities, serving on the Energy Advisory Board for the Department of Energy as well as many other issues that have come before our committee; and we thank you so much for your cooperation, willingness to come and testify all the time.

STATEMENT OF VICTORIA TSCHINKEL, SECRETARY, FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION

Ms. TSCHINKEL. Thank you very much, Mr. Chairman.

Mr. FUQUA. Ms. Tschinkel.

Ms. TSCHINKEL. First of all, I just wanted to say how grateful we are in the department that you came to Tallahassee to hold these hearings, and hold out great hopes for the results of them to give us some assistance in helping us tackle what I think all of us in the department see as the greatest challenge that we have ever had to face.

In addition to the 25 Superfund sites that were mentioned, we have about 232 uncontrolled sites in total that we are investigating right now around the State.

I want to point out that many of these uncontrolled sites are actually coming from rather common operations, not staggeringly large things that we read about nationally, but things like creosoting operations, battery recycling operations, plating operations and

so forth. Many of those actually fall under the current threshold for large generators that we regulate directly.

In fact, we do find that many of the larger industries have ways to get into compliance because they can afford to hire a unit-sized truck or whatever it takes to cart the waste off to Alabama or take it wherever it is appropriate, whereas the smaller generators just don't really know what they can do.

In fact, in a lot of the cases there really isn't anything legally affordable that they can do. So that is a serious problem for us.

These relatively small generators, however, are creating very serious problems for us. Because of our high water table and the sandy soils, we find almost instant contamination of the ground water from them. Even underground storage of gasoline has proven a problem that we are recognizing more and more all the time.

So right now this is our highest priority in the department, and the reason I mention that it is such a significant challenge for us is that we found that we had to significantly reorganize how we think in the agency in order to get our laboratories working carefully with groundwater hydrologists—and they are not necessarily in the same part of the organization—trying to get some engineering expertise brought to bear on restoration and to understand industrial processes; an awful lot of legislative interaction and action at the state level to try to figure out what kind of changes we need and a tremendous fiscal challenge because just for the Superfund match alone, we need about a 25 percent increase in our agency budget just for that one portion of the program.

So we have got a fiscal challenge at rough times, and enforcement challenge on uncontrolled sites particularly, and even during permitting because a continual question is "How far do you push during enforcement?"

We have put several industries out of business so far on enforcement. On the other hand, in other cases we deal with relatively large and trackable companies who do have money and you need to take a tough, very tough enforcement stand.

Once we have succeeded in putting industries out of business, of course, that means we are left holding the bag and have to figure out how to find the money to clean up ourselves. So what we really need to do is to find a way to work with the industries and make them pay their own way and make it possible for them to do that.

We have been working with this program now for about 3 years, although it doesn't really seem that long. Of course, we have got cradle-to-grave legislation now that has been developed that follows the Federal legislation. We have a trust fund which has been modestly funded for cleanup. We have an excise tax on generators right now, which sounded like a good idea at the time, but barely has paid its own way for collection. In fact, the Department of Revenue figures it is probably losing money on that tax right now. So it hasn't done a lot for our department.

The current legislative session is extremely active, and I am sure you are going to be hearing about a lot of proposals that are in front of them right now. Well, what progress have we made as far as department activities?

A few years ago, we did not know who the generators were. We didn't know where the storage facilities were, and we didn't know

who the transporters are. Right now we are tracking about 242 facilities around the State. They are being brought under monitoring schedules and we are requiring them to give us annual reports, and of course they are going to have to come into permitting compliance in our department a lot faster than the Federal schedule calls for.

We are putting them on temporary operating permits over the next 3 years, and the Federal schedule right now, which I hope will be sped up, calls for an 8- to 10-year phase-in.

But we have done some things that are a little different here in Florida in our own regulatory development because of our unique situation. First of all, we have developed some ground water regulations in the State.

As you know, there are some significant, important exceptions under the Federal hazardous waste laws. For one thing, you have a definition of hazardous waste that does not include all toxic substances.

So we have developed a ground water rule that is requiring everyone who generates pollution to ground waters to come in, get permits; and right now they are on a phased schedule.

For example, the phosphate industry, which is currently exempt under the hazardous waste rules, they are coming in for permits under our ground water regulations.

If you remember the uproar when there was sort of the stepping forward and stepping backward about the liquids in hazardous waste landfills, we have banned all hazardous waste liquids in landfills in Florida.

As I mentioned before, we are requiring an annual report from all our hazardous waste facilities, because we figure how can we find out what kinds of disposal or recycling facilities we need without knowing exactly what is being generated in Florida. And at least with respect to the facilities, the larger ones we are regulating and we are going to be finding that out. The first reports are going to come in June.

Now, let me single what I see as a number of issues.

First of all, there continues to be a problem in the State, regional, Federal relationship that needs to be improved. We find that EPA, which has traditionally had a communications problem between Washington and the regions, probably has even more serious problems with that starting up a new program with a lot of new, important decisions to be made. So whereas we have a fairly comfortable working relationship with the region, they cannot make good on a lot of commitments they make to the State and that needs to be straightened out.

Basically, there are many, many decisions to be made. Some of them are going to be wrong, but if we make a lot more decisions, we are going to get things moving. And some people just have to take responsibility and move forward.

We are finding that the Superfund program is moving, but it is moving slowly, largely for the reasons that I mentioned.

Of the 25 sites that you mentioned, Mr. Chairman, we only have 3 that we received any funding for so far in the State. We are going to get matching money from the legislature this year. I don't

think Florida is going to be reluctant to pay its share for the clean-up.

In addition to that, we found over this year that we have had a significant need for real emergency money when a city's water supply goes out and it is a poor city, for example, or we just need money to go in and wall off a place quickly.

We do not have any money to do that in significant quantities, and the House has provided some money for that in their program, which I am sure they will mention to you.

In addition, I mentioned there were 232 uncontrolled sites. Hopefully, enforcement will force some of the operators to clean those up. But the 25 Superfund sites, even if we had them all cleaned up under Superfund, would not be enough to take care of our 232 problems so we are also asking for money for State cleanup.

If we can just do a few sites a year and do a few more enforcements, over 5 to 10 years we may make some significant impact.

Municipal landfills continue to be a problem.

Mr. MacKay, as you mentioned, we are really forcing a lot of poor disposal into our municipal landfills, and it is an irony that under the current administration, that subtitle D of RCRA funding, which is the ability that we were given financially to handle landfills, has been cut off; and, really, the municipal landfill problem and the hazardous waste problem is one program.

You can't clamp down on hazardous waste without having that dirty toxic stuff turning up in the landfills, and you need tight programs on both ends of that.

A few other items. We have been negotiating with a private contractor to come in and work through the State from the tip to the toe, so to speak, to provide disposal of hazardous waste at cost for people. There is some startup money needed for that, and there is a lot of different names for it.

The current name for it in the Senate is Amnesty Day, and I think it is a very fine idea because it is an opportunity not only for people to empty their garages in a legal, safe way—and I have a couple of bottles of things waiting to take myself—but it also would be a good way to educate and inform the public about what things are safe and what things are not and what they can do in order to dispose of them. And the Senate has been very helpful with us in that regard.

I mentioned to you gasoline tanks. In Florida, we have about 40,000 gasoline tanks in the state, and they start leaking on the average when they are about 20 years old; and the average age of a gasoline tank in Florida is 20 years.

Practically every week we get reports of additional gasoline tanks; and when you consider that gasoline is toxic in about one part per million, that gives you an idea that it just takes one gallon to contaminate a million gallons of drinking water, a very, very serious problem for us. And both the House and the Senate have recognized that this year and are giving us additional authority to handle that.

Siting of facilities continues to be a difficult issue, and I can go into that a little bit more if you want. But of the two remaining problems that I see not being addressed probably adequately here at the Federal level, I am extremely concerned about trying to pro-

vide initially transfer facilities where people can come and bring their waste and have it safely packaged and disposed of.

It is fine to emphasize a small generator, but we have to tell the small generator there is something that he can afford to do and that he can do relatively easily. The Governor's budget contains money for assisting regional planning councils in locating transfer stations in each one of the regions around the state. We support that very strongly.

The House and the Senate are also grappling with that problem, but we need to come to grips with it very quickly, because the harder we hit our enforcement sites—and we intend to be hard on that—the more we are going to push for illegal dumping if we don't give them something legal that can be done with it.

The local governmental program, I think, is an extremely good idea because there are going to be many, many generators. In fact, probably if you want to walk away with one overriding description of our hazardous waste problem in the state, you could almost say it is in the word "solvents" which are used by almost everybody.

Solvents are continually contaminating ground water almost under every industrial facility that we have around the State, and we cannot at the State level hope to educate and hit every one of those smaller facilities, from dry cleaners to almost anything you can imagine, garages and so forth.

Local governments are in a very good position to do that. We can't hope to have the level of training at every local government that we could possibly hope to have at the State level, but a lot of this is public education. But it gets back to finding legal things to do, and that is what is going to be very necessary, is to try to tie in that local governmental program with getting facilities sited so we can direct people in the right way.

The final comment I wanted to make to you had to do with training and the Federal Government's ability to help us. I don't believe that we have ever faced such an educational challenge in our agency as we have trying to grapple with the hazardous waste program.

Everything from self-protection, which of course is a primary concern, to training on toxicities so we can find out the condition of local citizens and be sure that they are safe and healthy, to learning how to run laboratory samples more quickly and more accurately, because we are dealing in parts per billion many times—and that takes the sophistication that we had not enjoyed previously—and finally, some important decisionmaking: How clean is clean enough? How safe is safe enough?

And I think that one of the things the Federal Government can do is to help educate all of us who have to deal with this problem. It is an extremely difficult challenge for all of us, a very trying one at times.

I think we have made significant progress, but we are all extremely concerned and worried that we need to make a lot more progress a lot faster than we have been able to.

[The prepared statement of Ms. Tschinkel follows:]

SUBCOMMITTEE ON NATURAL RESOURCES, INDUSTRIAL RESEARCH
AND THE ENVIRONMENT

Victoria Tschinkel, Secretary

Florida Department of Environmental Regulation

Tallahassee, Florida

May 16, 1983

Florida residents have a deep interest in protecting our water supplies from contamination by toxic substances. Over 90 percent of our citizens get their drinking water from ground water. The state's underground water supplies are especially vulnerable to contamination due to our high ground water table and porous soil. Many of Florida's small industries generate hazardous wastes and we have found more than 200 uncontrolled hazardous waste sites in the state. Twenty-five of these sites are on EPA's national priority list for Superfund funding.

Today, I would like to briefly discuss the programs we now have in Florida for hazardous waste control and protection of our invaluable ground waters. Also, I'd like to touch on various issues related to reauthorization of the federal hazardous waste law including provisions for state program authorization, outline the progress we're making in cleaning up uncontrolled sites, and discuss the legislation being considered by the 1983 Florida Legislature to improve our ability at the state and local levels for dealing with these threats to our citizens' health and drinking water supplies.

Florida's Hazardous Waste Program

In 1980, the Florida Legislature reflected our citizens' concerns in this area when it passed the State Hazardous Waste Management Act. The Act closely parallels the federal Resource Conservation and Recovery Act by providing for cradle to grave control of hazardous wastes. It also created a trust fund for cleanup of hazardous waste spills and uncontrolled sites. In addition, the 1980 law established an excise tax on generators of hazardous waste in the state, provided a siting procedure for hazardous waste facilities, and substantially increased fines and penalties levied against violators of the law. The 1983 Florida Legislature is considering substantial and comprehensive improvements to our hazardous waste program at this very moment.

Through a joint effort between the state and EPA, a great deal has been accomplished in a relatively short time. Three years ago we didn't know the number of major generators, transporters, and treaters, storers, or disposers of hazardous waste. Now we know the number and where they are. Manifests are being used. Groundwater monitoring is required where appropriate, as is financial responsibility and proper closure and post-closure care. Operating standards have been established for generators, transporters, and treatment, storage, and disposal facilities. We've inspected nearly all of the facilities in the state and our permitting system is under way.

Under the state law, federal hazardous waste regulations have been adopted by reference as state rules. Florida's program has kept pace with the federal hazardous waste program; all amendments

or revisions promulgated by EPA have been adopted and incorporated in the state rule. This in itself is quite an accomplishment. Since the first set of final federal regulations were published on May 19, 1980, they have been revised or modified at least 217 times. Substantial staff effort has been required to track these changing federal regulations.

Because of the fragile nature of Florida's ground water and our great dependence on it, the department has seen the need to develop hazardous waste rules in some areas that are more stringent than EPA's. For example, we have a State rule which bans the disposal of containerized liquid hazardous waste in Florida landfills. You may remember the national uproar which occurred when the EPA lifted this ban in March 1982. The department also requires hazardous waste land disposal facilities to comply with additional state ground water monitoring and protection requirements. The recently adopted state ground water rule regulates all facilities that potentially cause ground water contamination. Included are facilities such as power plants and phosphate mining operations whose waste is not currently regulated under the hazardous waste rule.

Another state regulation that is more stringent than the federal requires generators and treatment, storage, disposal, and facilities to submit an annual report of their hazardous waste activities to the department. It was felt that a state annual report was needed to provide a reliable and state specific data base on which the department could evaluate the hazardous waste

program needs in terms of the type, quantity, and location of waste in the state. The first annual reports are due June 1.

Proposed Revisions to Federal Law

In addition to tracking changes in specific federal regulations, we are also carefully following proposed amendments to the Resource Conservation and Recovery Act--since this is the year for the Act's reauthorization. Several substantive changes have been proposed to help reduce inadequacies in both the federal and state hazardous waste program. Florida recognizes the need for proposed changes to the program which would provide better accountability of the small quantity generator, place limits on land disposal, reduce the burning and blending of hazardous waste as a fuel under uncontrolled conditions, and ease the process for authorizing state programs.

Many states are struggling with the program authorization issue. Currently, state programs are required to be "equivalent to" the federal program instead of "equal-in-effect" in order to achieve authorization. This is an example of a serious problem that all states face--every time the RCRA statutes or regulations are amended or interpreted differently, the states must immediately change their programs to conform to EPA's in order to get or to keep their authorization to run the hazardous waste program.

We have a comfortable relationship with the regional EPA office. However, I feel that implementation of both the RCRA and Superfund programs are being subjected to unnecessary delays as a

result of the involvement of the EPA headquarters in many decisions that could be made at the regional level.

Florida's Efforts to Receive Program Authorization

It is clear that the intention of RCRA was to encourage the states to assume full responsibility for implementation of their own hazardous waste programs. Since the development of Florida's hazardous waste management program, the department has been pursuing authorization from EPA to administer the state program in lieu of the federal program. Authorization is granted in two phases. Phase I, the authority to inspect generators and hazardous waste facilities and enforce certain management standards, was granted in May 1982. However, achieving Phase II authorization--the authority to issue specific state permits to hazardous waste treatment, storage and disposal facilities (which are in effect federal permits)--has proven more difficult. When we submitted our Phase II application, EPA identified several problems in the state law which it saw as major obstacles to granting authorization.

The 1982 Florida Legislature subsequently amended the applicable state laws and resolved many of EPA's concerns. However, Phase II authorization was ultimately denied due to a "default permitting provision" in Florida law. Under this provision, a permit application not approved or denied within a specific time period "shall be deemed approved" (issued by default). EPA feels that in light of the extensive technical review required for some hazardous waste permits, there is a distinct possibility that a permit may be issued by default. The

legislation currently in both Houses of the Legislature would change the default permit language for hazardous waste facility permits. We trust that this legislative change will ensure Florida's receipt of final authorization to manage the complete hazardous waste program at the state level.

This is not to say that we do not have an active hazardous waste facility permit program. The state permitting system is fully established and being implemented in Florida. There are 242 facilities in Florida that treat, store, or dispose of hazardous waste at their site. All persons who own or operate these facilities were required to submit a permit application to the department earlier this year. These applications are for temporary permits, which will set schedules for all Florida hazardous waste facilities to meet final operating standards within three years. EPA has estimated it will take 8 to 10 years to issue federal permits to all hazardous waste facilities. An important reason we seek state authorization from EPA is to relieve the regulated community from the burden of a dual federal/state permitting program.

Florida's Hazardous Waste Cleanup Program

Critical to the protection of Florida's ground water is the clean up of sites which are either contaminating or threatening our ground water resources. Although we have no specific sites that have gained national notoriety, the state is plagued with numerous small contamination sources that have the potential to cause large contamination problems. Included are sites like Sapp

Battery, United Metals, Fairbanks, Tower Chemical Company, Davie Landfill, 58th Street and others throughout the state.

Of 418 sites on the national Superfund list, 25 are in Florida. The department's own list of known or potential uncontrolled sites now numbers 232 and is continually expanding as new sites are identified. The state priority list, including the sites which are under some type of enforcement action, are currently tracked and reported on monthly. The list also includes the 25 Superfund sites and 34 other "worst case" sites.

Proposed Improvements to Florida's Program

Funds to clean up these sites are limited and slow in arriving. The department has received federal funds for only three of the Superfund sites. We are requesting \$7.8 million in state funds over the next two years to match federal dollars for Superfund site clean-up and to carry out cleanup operations on non-Superfund state priority sites. We are encouraged that the legislation will provide this funding.

Legislation is also being considered which would increase the amount of money available for mitigation of dangers from hazardous waste and for restoring sites damaged by hazardous waste.

Mechanisms proposed in the House and Senate bills to accomplish this include increasing the tax on hazardous waste generators, imposing a new wholesale tax on chemicals and pesticides, and using a portion of the interest accrued on the state's 35 million dollar Oil Pollution Recovery Trust Fund. Also proposed is a \$6 million environmental emergency trust fund to be

used by the department for abatement and cleanup of sudden, accidental and short term emergencies involving a threatened or actual contamination of the ground water.

With the increased state monitoring activities involved in site investigation, the workload of our central laboratory has increased substantially. Over the next 2 - 3 years, the Governor has recommended approximately \$2 million in additional funding to expand our laboratory capabilities. This includes additional personnel, equipment, and laboratory space. He also recommended additional personnel for our ground water section to establish and outfit two additional Operation Response Teams. The Response Teams are responsible for responding to, investigating and sampling known and potential uncontrolled sites around the state. This would double our present response capabilities.

I should also point out that a federally-funded open dump inventory showed that many of our state's municipal landfills are not in compliance with state and federal standards. It is not surprising that several of these landfills are on the Superfund priority list, but it is a deep disappointment that federal aid to the states for non-hazardous solid waste management programs under RCRA ceased in 1981.

New & Innovative Programs

I would like to briefly mention two other programs the department has initiated this year which I feel are important for the future. These programs have gained the support of our Legislature and, if implemented, would directly benefit the citizens of the state in the short and long run.

"Amnesty Days" is designed to be a statewide clean-up effort to purge the state of unwanted hazardous waste. These wastes are generated and stored by private households, state agencies, local governments, schools, and even small quantity generators. The department has begun negotiations with a large hazardous waste management firm which would spend 60 days in Florida. Using two teams, they would move through the state stopping at five or six large cities to collect these small quantities of hazardous waste on a one-time basis. State appropriations have been earmarked for this project.

A second new program is to deal with leaks from underground storage tanks. Such leaks are being reported with alarming frequency and have become a very real threat to the state's ground water quality. Citizens of the City of Belleview, Florida, for example, were on bottled water for more than a month after their main wellfield was contaminated by a leaking buried gasoline storage tank. Four private wells in the City of Stuart are contaminated from similar underground gasoline storage tanks. There are over 40,000 buried storage tanks at service stations across the state; most of these tanks are steel and nearing 20 years of age; and 92% of the state's drinking water comes from ground water. Add to this the fact that just one gallon of gasoline can contaminate a million gallons of groundwater, and this pollution source becomes of great concern.

DER is coordinating the State's efforts to reduce ground water contamination from leaking underground storage tanks. A

state work plan has been prepared which encourages voluntary action by tank owners and local governments to inspect and test tanks and thereby reduce the threat of contamination. The department has also prepared a public service announcement/pamphlet on this problem. And finally, draft legislation has been introduced in both the Senate and House which addresses this issue and may provide the department with specific authority and resources to regulate these underground storage tanks.

So, the 1983 Florida legislative session is now in full swing. Protection of Florida's ground water is a major issue, with proposed bills in both Houses which would greatly impact the state-level hazardous waste program and its interaction with both federal and local programs. I am convinced that the 1983 legislature will adopt legislation with changes that are both needed and positive.

Increasing Local Government's Involvement

There are also several legislative proposals to place more emphasis on local resources for the establishment of a comprehensive state hazardous waste management data base. There is a need for greater cooperation between state and local governments in identifying and resolving hazardous waste problems, particularly those relating to small quantity generators and siting hazardous waste management facilities. The proposed legislation includes the establishment of a center to assist local governments in hazardous waste planning, funds to implement the

local planning efforts, designating potential sites for hazardous waste facilities and redesign of the siting procedure.

We must also establish an accurate data base of both large and small quantity hazardous waste generators in the state. The county needs assessment studies mandated in the proposed legislation is an excellent vehicle for accomplishing this.

Not only will the county will get a better picture of the amount of hazardous waste being generated and managed within its jurisdiction, but the citizens of the county will become aware of the extent of the hazardous waste problem in their own "back yard". Only by knowing the facts -- the volume of waste being generated and the current management practices being employed -- will we all bring our collective heads out of the sand and more rationally approach the alternatives available to us for proper management of the waste. Also, by coordinating the local assessments at the State level, we will obtain a sound data base of compatible information in a reasonably short period of time. This data base is crucial to making statewide hazardous waste management decisions.

The Department of Environmental Regulation has contracted with one of the state's regional planning councils to do a needs assessment and make recommendations for siting of a transfer station in that region. We see an immediate need for several of these transfer stations throughout the state where generators of hazardous waste can cost effectively consolidate their wastes for proper treatment or disposal. Governor Graham's budget proposal to the legislature includes funding for similar studies by other

regional planning councils. These studies should also provide the information necessary to determine additional hazardous waste facility needs.

Facility Siting

There is a great need for facilities to handle hazardous wastes. But it is increasingly more difficult for communities to rationally respond to proposals to build such facilities. I feel it is appropriate for local governments to evaluate their hazardous waste facility needs and realize that it is more responsible to provide for the waste than to ignore the problem. This should ease the siting controversy in that community, and may even result in the aggressive search for a facility to handle wastes currently generated.

When I refer to local government involvement, I am not speaking of an additional permit requirement. Instead, I see a need for local evaluations of hazardous waste management and mismanagement practices. Also, local governments must play a key part in the successful siting of new facilities.

Additional Program Needs

The proper management of hazardous wastes is a relatively new and complex assignment. The state-of-the-art is developing and changing at a fast rate. The regulated industry and the state regulating agencies need technical information and training immediately. This will require a massive and expensive commitment by all parties involved. Without this support, including continued funding and training from the national level, the county's hazardous waste program will fail.

Conclusion

I believe Florida has a strong hazardous waste management program at the state level which has been established in a relatively short period of time and is quite comprehensive given the resource limitation within which we had to operate. There is, of course, room for improvement. The identification of all generators of hazardous waste, especially the small quantity generators, the proper management of hazardous waste and the successful siting of new treatment, storage and disposal facilities are key factors to a successful program. Local governments can provide services which make the overall state and national hazardous waste program successful.

There is an immediate need for EPA to provide training and technical assistance to both industry and state governments if hazardous waste is to be properly managed. Also, penalties for violations of hazardous waste regulations must be stringent and properly enforced at all levels. The legislation being considered by our state legislature during this session shows an increased awareness of the hazardous waste problems facing the state. If this legislation is passed, Florida will be ahead of most other states and may serve as a model for other states to follow in the formation of a consistent, well founded national hazardous waste management program.

Mr. FUQUA. Thank you very much, Secretary Tschinkel.

I see Senator Kirkpatrick is here. Senator?

Senator Kirkpatrick is a member of the Natural Resources Committee and is chairman of the subcommittee that deals with hazardous waste. We would be happy to hear any comment that you have to make, Senator.

Mr. KIRKPATRICK. Where do you want me to make it from?

Mr. FUQUA. You could sit right there next to Secretary Tschinkel. And we may have some questions for you. We thought we might accommodate the Senator in case he has a meeting or something to attend to.

Mr. KIRKPATRICK. We have an appropriations hearing at 10 o'clock, so we have to go back and find a way to fund all these things.

Mr. FUQUA. Good luck.

STATEMENT OF GEORGE KIRKPATRICK, MEMBER, STATE LEGISLATURE OF FLORIDA

Mr. KIRKPATRICK. I personally appreciate you-all taking the time to come to this room and this place this time to give us, the, I guess, emotional lift, congressional credibility or whatever you want to call it, for what we are trying to accomplish down here.

As you probably are familiar, we have about \$1.6 billion worth of requests for new money from our agencies, and we have about \$200 million to reach those requests. And I know you-all are familiar with dealing with that situation.

You-all have two advantages: You have a lot more money than we do and you can spend it when you don't have it. Fortunately, for us here in Florida, we have got a constitutional amendment that precludes that.

So we are faced with the situation of having to get this state to establish some priorities, and I personally do not believe that there is any higher priority than this hazardous waste problem.

I think, as the Secretary said, education is a big, big problem for the State of Florida. People just don't put on the top of their priority list things that they are interested in or things they are concerned about.

Now, if it happens in Fairbanks and a few wells get contaminated, then everybody around Fairbanks, where they have a potential contaminated well, gets all upset. Or if an underground storage facility collapses or leaks in Belleview, Fla., then everybody gets upset about Belleview.

But the people in Tampa don't get upset when an underground storage facility leaks into the aquifer in Belleview. The people in Orlando or Fort Lauderdale don't get upset when the Department of Transportation—a dump of toxic waste is discovered in Fairbanks.

Now, as you-all are well aware, when the schools aren't working properly or when we have a riot in Miami, then people start getting upset statewide and we are able to build some statewide momentum to put a plan into place.

The senate believes, I think—and this has been our approach to our legislative effort—that you can't do all of this at one time. It is just impossible to do that.

I think that what we are going to have to do is to develop a staged program that is going to attack some of those areas with greatest needs first, and then we are going to have to develop some public support.

When you balance the hazardous waste cleanup against teachers' salaries or state employees' salaries, I can tell you in our legislature that is not going to come out first on the list and I think it is that important.

If you would like for me to, I will just give you a quick overview of what the senate feels like we ought to try to accomplish. I apologize for not having my 10 copies in advance and my 35 copies for the press and all this other stuff, but we have been working on some other things this weekend. I will try to get some handouts if anybody is really interested in having something to take home.

Our approach has been one that, first of all, we need to try to determine where the generators are, who the generators are, how much they are generating and what they are generating. There is still a lot of confusion about just exactly what is a hazardous waste or a toxic waste.

There is such a big list that you can go into almost anybody's garage or underneath their kitchen sink and you can find hazardous materials. And it is what is done with these materials and how big a concentration they are in.

I was interested to hear the secretary say that we need to find out a matter of degree how much is safe or at what level, or how clean does the water have to be for us to survive.

I have always had a problem with the approach to the Clean Water Act in that your secondary treatment cleans up the water to, say—I guess you could give me the exact figures, but 92.6 percent or something like that, is that close enough or 95.6 percent, something like that.

Your tertiary treatment system is cleaned up to about 98.2 percent. The difference in cost between those is, say—well, I would say double or maybe quadruple.

Now, it was my understanding when we passed the Clean Water Act in Washington that we were to clean up as much water as we could clean up as far as we could clean it up.

Well, if we could clean up all the water in Florida, the 92.6 or 95.6 percent, or whatever the number is at the secondary level, I think the people would feel very comfortable. They would feel very safe. They would love to have it cleaned up 100 percent, but they know that is not possible.

Now, if you carry that into hazardous waste, it doesn't take much of this toxic stuff to cause us some problems. And it is spread out all over this state, and it is going to get worse as opposed to better because we have more of it coming in every day.

Now, you can't just say, well, we are not going to have any more hazardous chemicals, because commerce stops, your tax revenue stops, your teachers don't get paid, and everybody is concerned about that.

So what we feel like we need to have initially is a staged program, one that we can accomplish. And we need as much Federal assistance as we can get.

Now, I don't typically ask for, you know, a Federal handout. I think you fellows are doing a good job up there holding the line. You are beginning to have some effect on this economy. I applaud you for it. I encourage you to go as far as you have to go to give this country some new life.

When you get into these programs, I think the hazardous waste area is the most important that the money that you put up gets down to the actual site that we are trying to clean up. We don't need to waste a lot of money in overhead, do a lot of research and all this kind of stuff. Everybody knows that the things on this list are dangerous; and we know whether it is 100 parts per million or 100 parts per billion, it can still kill you or cause some serious problems to our fresh water, ground water resources here.

What we have instructed, or what we have proposed to put into place in the State of Florida, in 3 years, we hope to be able to have every county in the State develop a hazardous waste management plan. This is a mandate from the State. We are going to fund this through the regional planning council, and we are going to take three of the most serious areas, or the areas where the secretary and a lot of the other folks have identified the majority of the sites that we already know about or the generators that we already know about.

And we are going to go into those areas—this particular year, the deadline is 1984—to have those hazardous waste management plans completed.

There are a couple of interesting elements. Every county in the State of Florida is going to have to go through the trauma of determining where they can put a hazardous waste transfer facility site or a collection facility site. I mean, it is ludicrous to go through the same situation we have been through with our prisons where everybody is generating prisoners and inmates, but nobody wants to have a prison to house them, so, poor, old Union County or Bradford County, or wherever you can stick it, is where the prisons wind up.

Well, that is not going to be the case in the hazardous waste collection facility program. We are going to require every county to go through that trauma of selecting a site. We don't know which ones we will use, but we will know we will have one available in every county.

There is also an override of local government built into this particular proposal that the senate has developed. That frightens a lot of people, but hazardous waste disposal is a State problem.

It is like the corrections system or the school system. It is not a local problem. It may be generated on the local level, but it is a statewide problem.

We have a facility not too far east of here that is very suspect of how much toxic chemicals it is allowing to get into the ground. That is at the very top of the aquifer. We have got some facilities or some dumps—well, the one in Fairbanks is, as you all well know, at the very top of the aquifer, our only ground water supply.

Now, we can't allow just because this is some rural, secluded area, it is to be overlooked, and just concentrate on the big cities.

I feel like we are going to have to make sure that local government cannot make the final decision on the siting of these facilities. It is nice to say we are going to ship everything out of the State of Florida, but that is not going to last forever. I don't think anybody in their right mind believes that. So we are going to have to prepare ourselves to take care of it.

Now, we are not going to have any more open landfills and dumps that you just haul everything into, but we are going to have to make some kind of conscious effort to solve the problem. And you cannot do that in the middle of a crisis. You have got to do that at a time when things are more calm.

And that is what we are hoping that this needs assessment process is going to help us develop.

I will tell you about three more things. We took the problem of hazardous waste and separated it into two pieces, the cleanup of dumps—are there 25 sites on the EPA list—at 25 sites.

We hope that you all will continue this program and you can increase the number of sites. But those 25 sites we wanted to make sure we had the funds available.

We have developed a financing program through a trust fund. We don't have to compete with anybody for the general revenue. We don't have to raise new taxes that will give us an opportunity to have the bill killed. We found a safe place to get our EPA Superfund match money. That is the first part.

The second part is this management program that I was describing to you, and I think that that will give us an ongoing ability to locate, clean up and monitor the entire situation.

We have one other concept that we are going to try. We have appropriated \$400,000 in the bill that I am working through the Senate—and we are taking it to the full appropriations committee today. Well, that one has already been. I guess the rest of our water package goes to the full appropriations committee today.

There is \$400,000 in there for what we call amnesty day. This approach, I think, will probably do more to educate the public than anything else we can do. We are going to negotiate a contract with some private companies that are in the business of collecting and transferring and hauling hazardous waste and hazardous materials, and then we are going to do a statewide program to get every housewife to look under the sink and get those chemicals that, if they threw them in the trash can and they were hauled to the dump, they could be a potential problem; the farmer who has two or three cans or canisters or plastic bottles out behind the barn with a little old DDT, which is not used anymore, not allowed to be used anymore, those kinds of things, to bring all that stuff in; the thousands of small businesses that have got barrels of this stuff out behind the business because they don't know what to do with it.

We would not have had a problem in Fairbanks had we had some kind of good, strong operational plan where you write on the little list of instructions for the Department of Transportation that when you got through with whatever that stuff was, you put it on a truck and you haul it to this specific location. It is collected up

with the rest of it and hauled out of the State or incinerated or detoxified, or whatever we could do for it.

That is the major problem, as I see it; and that is what I feel like is going to be our approach to try to solve the problem.

I will be glad to answer any questions you-all might have.

Mr. FUQUA. Thank you very much, Senator Kirkpatrick. Is Senator Neal—

Mr. KIRKPATRICK. He is one of the appropriations subcommittee chairmen, so I am sure he is covered over—

Mr. FUQUA. We had heard that he might be here. But we want to thank you, both of you, very much.

You mentioned the legislation that is making its way. Has it passed the Senate yet? You mentioned it was going into appropriations.

Mr. KIRKPATRICK. We have passed it through all the committees of the Senate, and it will go to the floor of the Senate this week and next week to the House.

Mr. FUQUA. Let me commend you for that. I think that is a very fine idea.

Secretary Tschinkel, in the small dump sites or landfills, what level of danger do you see that has now, and maybe 10 years from now, if, say, this legislation does not pass or we do not address ourselves?

Ms. TSCHINKEL. Mr. Chairman, you probably know that there are two or three municipal landfills on the Superfund list right now, and I do not believe that the situation would change substantially unless we took action to stop it, because many of these landfills are in locations where there are a lot of smaller generators. And I don't think that the contamination at the landfills are necessarily due to the major large companies in the area. So it is a significant problem in Florida.

Now, of course, new landfills are being designed a little bit better. Nevertheless, even with liners, one doesn't have complete confidence. And I think there is no question that stuff needs to be kept out of our landfills in the State.

Mr. FUQUA. Let me say about the Superfund that we are all very hopeful that under the new management of the EPA, particularly when the new Assistant Administrator for the Superfund is appointed, that that program will get straightened out. And I can assure you that there has been ample congressional scrutiny of that program. And we hope that under Mr. Ruckelshaus that it will move forward as it was intended to in the first place.

I think that is part of the problem, but there is no need to beat that horse again. But I hope it will get—

Ms. TSCHINKEL. Mr. Chairman, there already is some announcement from the Environmental Protection Agency about some changes in procedures that look excellent to us, which is that they are talking about coming in and doing the phase 1 and 2 studies, which the match money was always very, very small for that.

But it took a while just to get that organized and get contracts signed; and they seem to tend to come in and do studies very rapidly, which should enable us to get in and do some of the things that the Senator was talking about, which is just get in and clean the things up.

Mr. FUQUA. Mr. MacKay.

Mr. MACKAY. I just wanted to follow up on a couple of comments that Secretary Tschinkel made. You have, by rule, prohibited disposal of liquids in the south landfill sites. To my knowledge, there is only one, or perhaps a very few, hazardous waste sites where those liquids could be disposed of in Florida.

Do you have any idea of where they are going now that they are not going into the landfills?

Ms. TSCHINKEL. Well, as I told you before, that is exactly our concern. I imagine they are being disposed of illegally, and they are in such small quantities, we have no way of tracking those kinds of things under the current system. That is why the proposals that are going through the legislature are so important this year.

Mr. FUQUA. What about the nonliquid waste?

Mr. MACKAY. It is still going into the sanitary landfills.

Ms. TSCHINKEL. Well, the smaller generators very likely are. I mean, every one of our permits on our municipal landfills, almost every one, I think, say that those landfills cannot accept hazardous waste from small or large generators. But I think the point is that we are not regulating the smaller generators, and they probably don't even know they are generators and so that is where they are disposing.

It is not a legal practice, but they are doing it.

Mr. KIRKPATRICK. May I make a comment about that same subject?

I think there is a very fine line here where you run the risk of sending all this stuff to the woods.

If we don't have some incentives and good educational program, if we get so strict, people aren't going to want to keep this stuff around their house or in their office. They are going to want to get rid of it.

Now, we have one—I will say it again. We have one transfer facility currently in the State of Florida. We have been trying to get a permit, or there have been people trying to get a permit—I think it is in Hillsborough County. It is worse than trying to get a prison.

Now, it is an absolute joke if we are going to talk about the small generator and he doesn't have any place to dispose of it. You are going to penalize him, you are going to prosecute him. But if he wanted to take it somewhere, he doesn't have a place to take it. He has got a big note that says, "We are not taking it to the landfill anymore." He knows it is dangerous.

He can't even find anybody on the telephone that will pick it up for him. Now, nobody is going to drive a big hazardous waste semi-trailer truck down here to pick up 3 gallons of somebody's hazardous chemicals. So that 3 gallons is probably going to go out into some sinkhole because he wants to make sure it gets far enough down to where nobody can ever trace it back to him. And that is the worst place that he can possibly put it.

So through programs like the Amnesty Days—and that may seem like to be a little bit of a joke or treating it kind of lightly, but what we are trying to do is raise the level of awareness of the public and to force everybody that is concerned to go through this drill, if you will, to bring it in somewhere, make it as safe as possi-

ble when they collect it all up and then haul it off, because we haven't even been through that drill yet.

I think you all need to remember that every time you get into this discussion, there has got to be some incentive to doing it right, because it is too easy to do it wrong.

Mr. FUQUA. Mr. Lewis.

Mr. LEWIS. Thank you, Mr. Chairman.

Ms. Secretary, do you find any problems with cooperative activity between the industries and your department as far as hazardous waste?

Ms. TSCHINKEL. It is surprising that, really, there has been so little problems with what I would consider to be industries that are in Florida to stay and that have sufficient money in the bank that they can handle a problem that may arise. It is not that they aren't finding problems or we are not finding problems, but in general, they are extremely anxious to solve the problems.

They drink the water on their property themselves. They feed it to their employees. It is important to them. The industries we have problems with are the ones you would exactly expect. It is the marginal industries, the ones that are on the verge of bankruptcy, the ones that have bad business practices.

And in those cases, the judgment call that is always difficult on an enforcement case is really to decide whether to try to let them stage their cleanup and keep in business so they can pay for their own cleanup or to come down on them so hard that they go into bankruptcy and then the state is the last person in line—we are so fortunate, we come after everyone else—that all we will get is a truck or a piece of a truck as they go through bankruptcy court.

Like I said, what I would classify as the legitimate, reasonable health industries in Florida have been very good and cooperative to work with.

Mr. LEWIS. What kinds of problems are you having with the permitting of solid waste landfill sites as far as the requirement for lining for the protection against hazardous waste, and what kind of control would you have over solid waste sites so that hazardous waste does not get into that?

Ms. TSCHINKEL. Well, with respect to normal municipal landfills, the real problem with municipal landfills isn't the liner question. It is the location question.

And just like the Senator was saying, even with the plain, old municipal waste, we are having a hard time in some local areas getting decisions made and money committed to build even a decent landfill. We are requiring liners more and more.

That would be true for—I mean, you are always going to have metals. There are a lot of things that are not classified as hazardous waste that are toxic for us, and there is always going to be problems with leachates going into our ground water from even a well operated landfill.

Now, I think in Florida, first of all, what we are trying to do, as the Senator indicated, is we have got to have transfer stations as our first priority. People have got to get used to, you know, once every 2 months taking whatever they have got, going down to the transfer station, paying a couple of dollars, or whatever it is, to get their things packaged up and, for the moment, sent to Alabama.

But then we can't stop there. We are going to have to look, based on the local government assessment, and based on our statewide annual reports, what kind of other facilities do we need in Florida? Do we need a lot of rejuvenation facilities for solvents where the solvents can be brought in, cleaned up and sent back out again? Do we need chemical alterations to make scary things benign? Do we need incinerators?

All of that has got to be the next step after the transfer station when we have the information from our local government and our own annual reports.

But I don't think any of us right now in Florida are looking at a very high priority for landfilling hazardous wastes in this State. Most of the State is just at much, too much risk for that and there are probably better and safer things to do than landfilling.

And I understand that is a national trend as well, is away from landfilling.

Mr. LEWIS. What kind of programs have you set up or asked the legislature to set up to better educate people as far as transfer stations? Are they frightened to death with Love Canals, the dioxin in Midland, Mich., and a number of other places?

They know that Florida is a sponge and it sits up on top of a couple of aquifers and they are afraid that anything could go out of control and destroy our water supplies.

Ms. TSCHINKEL. Well, I think this Amnesty Day is going to be great for that because they are going to go into every area of the State and everybody is going to have a chance to meet their friends and neighbors with their bottles and see that everybody has got bottles and canisters of things; and they are going to see them all piled up in one place. There will probably be an area that has a nice concrete bottom to it, and they will see the kinds of packages that they are going into.

And hopefully, everybody is going to say this is really a good and wonderful thing. And that is going to be very important on our part. I mean, the legislature will, hopefully have done their share; but it is going to be important for us to work with the industries to be sure that they run an absolutely top-notch, impeccable operation while they are in Florida, because if we miss that opportunity and we have problems with how it is run, which would be our fault and their fault, we may never get the chance to really have a good public education program.

But we are putting a lot of hope into that.

Mr. LEWIS. Do you think that program is going to give them sufficient confidence that they know that with the transfer stations that would go in, there would be a competency level established for the technicians operating it so that it would not have spills that would create a havoc?

Ms. TSCHINKEL. Well, I think that is a start. And when the local governments go into the siting more—which both houses have a different version of how that would be done—but I am sure either one will work out very well, but mainly to put emphasis on siting of transfer facilities. I am sure there are movies that can be shown and all kinds of other publication that can be done at the local level to show people what one of those looks like elsewhere in the

country and the ones that we do actually have operational here in Florida.

But it is just like the Senator says. That is the biggest fear we have got in the agency. We are permitting, we are clamping down, we are enforcing; but what are we giving to the people as a legal alternative, except to the large generators, who can afford the semi truck, all white with the uniformed people in it?

But the small generator and the households can't afford that.

Mr. LEWIS. You may have covered this, Ms. Secretary, but I am interested. Do local governments have a role defined for them concerning identification of smaller quantity generators of hazardous wastes?

Ms. TSCHINKEL. Absolutely, because there are so many different people.

Mr. LEWIS. Would this be through the legislature directing them or through a ruling of the—

Mr. KIRKPATRICK. That is what we have done. I don't know if you all are familiar with Dr. Roy Herndon's project that they worked out with—

Mr. FUQUA. He will be testifying today.

Mr. KIRKPATRICK. That is right—here in Leon County. But Leon County didn't wait for anybody to send them a check or to raise their level of awareness. They just got right into the middle of it and said, "We believe it is an important priority."

They worked out an arrangement with Florida State University, and I think it has been an extremely successful program and it is the type arrangement that we need to make throughout the State.

Our 3-year phase-in does not preclude any county from making the determination that they want to do something about it now. Hopefully, Marion County and Alachua County certainly will. They have had these problems develop.

And I think that we are going to have to continue to educate local government.

I want to tell you two things. First, I will tell you something you can do for us. I will give you a mission. If you all come all the way down here and we just have a lot of conversation and you don't go home with a mission, then we have failed, right?

One of the things that we need to accomplish in the State of Florida is to finish the soil survey. That was a 10-year program. We are in the 10th year, and it is only about 60- to 70-percent complete.

Now, trying to deal with hazardous wastes, just developing, siting a transfer facility—because everybody is so concerned about it—we have got to make sure that we site it in a proper area.

When you are putting in these municipal landfills, and the use of septic tanks and all the other things, underground storage tanks and all the other things that potentially can contaminate our ground water, we can't allow that to happen. And this is one of the tools that we really need.

Now, the State I hope is going to fund an accelerated version of the soil survey to speed this up. I found another trust fund that was sitting there; and if I can get it by both houses, we are not going to have to compete with the teachers for that general revenue either or wait on tax buildup for us to get this thing complet-

ed, and then we will pay it back from a tax on, or a permit fee on septic tanks.

But we need to get that accomplished. Anything you all can do. Here, millions make a big difference. Up there, I realize it is billions.

So if you could throw us a crumb or two or help us get a few little pieces of equipment that maybe are stuck away in one of those warehouses because they weren't the right color, or whatever it is, we would appreciate any effort that you can make with the USDA or USGS or anybody else that can help us complete this survey.

Let me tell you one other thing that we have got to be very careful about in this particular area. This is a bad situation, but it becomes much, much worse and much, much more difficult to operate and to deal with when you get in the middle of a tremendously strong emotional debate.

It is bad enough sitting there leaking into the ground. But if everybody is running about screaming and wrenching their hands and, "The end of the world is coming," then it becomes impossible to do anything about it.

And we are going to have hazardous waste in this State forever. We are just going to have it. And if we are not allowed to develop a plan to deal with it because of this high level of emotionalism, then we are never going to be able to solve the problem.

I am sure the Secretary would be much further down the line in implementing the programs if we could defuse the tense situation that exists, if nothing else but to facilitate our siting process. So anything you all can do with that.

Everybody likes to talk about Love Canal, and that brings up such, you know, conjures up a real serious problem in everybody's mind. One gallon of gasoline leaking into the aquifer contaminates 1 million gallons. And we had 10,000 gallons leak out of an underground storage tank in Belleview. Now, my little calculator doesn't run up that high, but that is a bunch of gallons.

Now, if we only talk about that as opposed to what we are going to do to make sure that doesn't happen again or how we are going to prepare these little communities to handle it and what kind of contingency plan, or if it takes 12 days to find somebody to talk to and you want to report a problem like that, then we are not ever going to make the progress we have to make to solve that problem.

Mr. LEWIS. Thank you, Mr. Chairman.

Mr. FUQUA. Thank you very much, Mr. Lewis.

Secretary Tschinkel, we thank you very much for your testimony and being here this morning.

Senator Kirkpatrick, we appreciate your being here. We commend you and your colleagues and the legislature for, I think, a real excellent step forward in addressing this in a very practical and sensible fashion. So we thank you very much for your help and also you, Secretary Tschinkel.

Mr. KIRKPATRICK. We are willing to do anything you want us to do to help out. I know you all have a lot of staff; but if you just need a couple of folks who are willing to bust it to help you, you call on us, OK?

Mr. FUQUA. We have. Thank you.

Our next witness this morning is Dr. Roy Herndon, who is the director of the hazardous waste management program at Florida State University. Dr. Herndon.

STATEMENT OF DR. ROY C. HERNDON, DIRECTOR, HAZARDOUS WASTE MANAGEMENT PROGRAM, FLORIDA STATE UNIVERSITY

Dr. HERNDON. Thank you, Mr. Chairman.

My name is Roy Herndon. I direct the hazardous waste program at Florida State University. I am a physicist by training, and I have worked for about the last 10 years in the area of hazardous waste management.

I have conducted much of the work in Florida that has been done to evaluate the hazardous waste problem, and this work has involved research at the Federal, at the State, and the local levels of government.

During 1981 and 1982, I served as executive director of Florida's Hazardous Waste Policy Advisory Council. This council was chaired by Mr. Buddy MacKay, who now serves as a member of the congressional committee that sits here today.

During that period of time, we took a careful look at the State's hazardous waste program in order to determine what recommendations could be made to strengthen the hazardous waste management program in the State.

During this period of service, it became clear to me that an important piece of the hazardous waste management puzzle was missing, and this missing piece has been discussed quite eloquently already by Senator Kirkpatrick and Secretary Tschinkel. And this missing piece concerns the role of local government in the overall State program.

Indeed, local government represents the front line of defense in dealing with the preventive measures that must be taken in order to insure that present and future hazardous waste practices do not lead to additional uncontrolled hazardous waste sites.

If we do not learn from our past mistakes, then surely we will repeat them. By establishing this local government nexus in the overall Federal and State program, we can take what I feel would be a major step in preventing the Love Canals, the Times Beaches, and the many other problems associated with improper hazardous waste management that were previously alluded to.

I would be happy to answer any questions.

Mr. FUQUA. Thank you very much, Dr. Herndon.

We have listened to Secretary Tschinkel and Senator Kirkpatrick talk about the smaller users because the larger generators were covered. How serious a problem do you see that to be in Florida, and how successfully can disposal sites be located in Florida with the high water table and aquifers that are so near the surface? Can we provide suitable sites for this waste disposal?

Dr. HERNDON. I think if you separate the problem into looking at treatment, storage, and disposal facilities as the possible management options, then at this time the geological and hydrological conditions in Florida do justify the risk of putting in a landfill for hazardous waste disposal anywhere in the State. This does not preclude the other management options from consideration, however.

Having said that, you have still got to come to grips with how do you supply alternatives for disposal for both the large and small generators?

First, if you can volume reduce the waste—for example, by incineration—to a point where you would have to send out of State for final disposal only a small fraction of what now has to go out of State, you accomplish two things. You certainly make it cheaper for the out-of-State disposal, and also you indicate to those States that have disposal facilities that there has been a good-faith effort on the part of Florida to reduce the volume of waste being sent there.

Another serious problem concerns the small generator waste. This is extremely important in Florida because, as Congressman MacKay and Secretary Tschinkel pointed out, a lot of that smaller generator waste is finding its way into sanitary landfills.

Mr. FUQUA. Well, do you think we will be able to provide a methodology for disposal of this type waste? Is it too expensive to establish, for, example a waste vitrification program?

Dr. HERNDON. The problem right now concerning the people who are not complying with the hazardous waste laws is not just the cost of disposal, but rather lack of awareness of what is required. In addition the problem is not with the total amount of hazardous waste that is generated in the State but rather that portion which is mismanaged.

Many firms are not complying with the laws because they are ignorant of what they are supposed to do. They have never heard of the Resource Conservation Recovery Act; they have never heard of hazardous waste regulations.

Even if you had facilities in place right now you would have to go through the process of identifying the generators at the local level and educating them as to the proper management procedures.

I think that one could locate in the State of Florida, if it were shown to be needed at the end of these local assessments, facilities that would properly protect the environment and properly manage the hazardous wastes. The required technology is available.

Mr. FUQUA. You mentioned the technology is available. We have funded through the Department of Energy, and I guess some through EPA, several projects for various types of digesters and other things to dispose of solid wastes.

I don't know of very many of those that are still operating today. There was one on Long Island that closed down and one at Disneyworld, at Epcot Center, that was funded by the Department of Energy. It has since closed down because it was not economical. Do we have the technology?

Dr. HERNDON. There are management methods that need a lot more research before they could be developed as commercial plants. I think however, when you talk about incineration, for example, that we know a lot about combustion. We know a lot about how to construct an incinerator that will detoxify a number of organic compounds.

There are certain technologies that need further study that could be put in place in the future. Some of this work would include biodegradation of certain toxic compounds. With regard to inciner-

ation, I think we would be able to move quickly if there were a sufficient quantity of waste to justify such a facility.

Mr. FUQUA. Mr. MacKay.

Mr. MACKAY. Mr. Chairman, I don't have any questions at this time. I think it would be important, not only with Dr. Herndon, but with Secretary Tschinkel and others, that we reflect an authorization for staff or others of us to submit written questions after we get the agenda completed.

It may be that it will turn out that there are other questions we need to answer, but I would like to ask that authority to submit written questions.

Mr. FUQUA. That would be agreeable, would it not, Dr. Herndon?

Dr. HERNDON. Yes. Thank you.

Mr. FUQUA. Mr. Lewis.

Mr. LEWIS. I have no questions.

Mr. FUQUA. Dr. Herndon, thank you very much. We appreciate your contribution and the leadership you have given.

I notice that Representative Jon Mills, the chairman of the House Committee on Natural Resources, is present. I would like to ask Representative Mills if he has a statement to make.

Speaker Moffitt had submitted a statement which we have made a part of the record. If you would wish to make any kind of comment, we would be delighted to have you.

STATEMENT OF HON. JON MILLS, CHAIRMAN, HOUSE COMMITTEE ON NATURAL RESOURCES, STATE OF FLORIDA

Mr. MILLS. Mr. Chairman, if I may, I could just summarize briefly what the House bill has done currently. We are in the process of going to conference with the Senate, I think, within the next week.

Mr. FUQUA. You don't have many weeks left.

Mr. MILLS. That is true.

But as I think all of you may remember, sometimes these things can be more expeditious than others. I would like to say that I think that the House and Senate relationship on the overall water bill has been very good so far, and we anticipate, I think, good results out of the conference.

I know that a lot of your focus here is dealing on various levels of government cooperation, and that is a significant portion of the House bill, and we think that it will ultimately be of the Senate bill as well.

We particularly have a provision dealing with local government, and Dr. Herndon is dealing with the pilot program which he discussed, which we have funded. We believe that the result of dealing with local governments more effectively is the ability to identify more sites.

You may have heard that there are—well, we have 25 Superfund sites in the State of Florida. There are somewhat over 175 and maybe 200 other sites identified by DER. And when you go to different localities—for example, we were in Tampa for hearings. The local folks in the Hillsborough County area believe there may be 100 sites in Hillsborough County that have not yet been identified.

So without some assistance to local governments, we won't be able to identify them. And there is a series of occurrences across

the State that fall outside the Superfund area, the Chipola River, Fairbanks, Lloyd, Belleview, on and on; and we at the moment have no comprehensive way to respond to that.

Just briefly, the parts of the House bill, most of which have some comparison to the Senate bill, we have a provision for comprehensive data collection, which doesn't exist, which would get the Department of Environmental Regulation to coordinate what already exists.

There is a pesticide provision in the House bill which is somewhat distinct from what is in the Senate bill. We believe that the Department of Environmental Regulation should become more involved in pesticide registration to be sure that we don't have more occurrences like the Temik occurrence.

Presently, we want to make it clear that we believe the Secretary did his job. That is, when he was confronted with the occurrence and when it was identified that there was well contamination, he did suspend the use. There was not, however, a process for a precertification. There was not a process for testing Temik under Florida conditions.

As a matter of fact, the evidence existed that under a similar condition—that is, Long Island—there had been contamination. And if we would have had that kind of system in place, we might not have started to use it. So what we have in this provision is a system to do that.

We also are dealing with the issue of artesian wells, which produces some contamination among surface waters and aquifers. I think it is mainly a local issue.

The hazardous waste siting, which I know Senator Kirkpatrick discussed, we think is very significant. The siting processes that are in the House and Senate bills are analogous. We both feel you have to develop a way to ease the burden on local government in terms of its decisionmaking process, but to allow us to site facilities so that people aren't simply throwing the contents of unknown containers away.

There is an example again in one of the counties that we visited of a lady who notified the department that she had several containers in her garage, didn't know what they were, her husband had recently passed away.

They came out and checked them. She was about to throw them in her trash can, which would have gone to a landfill, and they were arsenic used in the gentleman's business, whatever that was.

But in any case, that is a direct occurrence. The people do have hazardous waste materials in home use. And even the small users, the dry cleaners, et cetera, the below 1,000 kilogram disposer, which is not yet covered, is Florida's biggest problem because we don't have the major industries, which are usually better regulated and better controlled than the small user.

To deal with emergencies like I have mentioned, we have an emergency trust fund to handle the incident in Lloyd, to handle the Fairbanks incident, just so that we wouldn't have a period of time where no one is responsible and no money is available. And that is what has happened in those instances.

All you had was the Department of Transportation delivering bottles of water as a response to well water contamination in Fairbanks, and that is not enough.

As a last part of what we are doing, we have a septic tank provision dealing with restrictions on use, which is always controversial. The distinction is that there are some distinctions between the House and Senate bills on setbacks and on application to pre-1972 platted lots. But we hope to be able to work that out.

Also, one more provision which does definitely relate to the Federal Government is that sewage treatment plans, because of the cutbacks there, there are at least perceived needs at this point of as much as \$20 million for smaller cities who are unable to finance expansion in their sewer facilities and as much as \$30 million beyond that for larger cities.

Right now that is not in the House bill because there is no money that we have been able to identify to do that, and the provision is in the Senate bill but with no money either.

And that is a summary of where we are. We are fairly parallel in terms of what we are trying to do. The importance of you as the committee coming down here is tremendous to us, because the EPA has identified Florida as—everybody knows we are in the top five of hazardous waste sites and Superfund sites, but not everyone realizes how important that is to Florida's drinking supply.

And since Florida is so delicate, the bottom line is that EPA says that we are the most endangered State in the country in terms of potential hazardous waste impact in terms of drinking water.

So we thank you very much for being here.

Mr. FUQUA. Thank you very much, Representative Mills. Let me congratulate you and your colleagues in the House for moving along, and we are hopeful that the ultimate coming out of the conference with the Senate will probably be a model, maybe, for other States.

I thank the committee for also recognizing the severity of the situation because of the high water table and the aquifers that we have in Florida and the potential damage. I thank you very much.

Mr. MacKay.

Mr. MACKAY. I don't have any questions, Mr. Chairman. I appreciate Representative Mills being here.

Mr. MILLS. Thank you, Mr. Chairman.

Mr. FUQUA. Mr. Lewis.

Mr. LEWIS. No questions, Mr. Chairman.

Mr. FUQUA. Our next witness from the public interest panel will be Mr. Bernard Windham.

We have two other members of this panel. I would like to ask Mr. John Schroepfer, chairman of the board of county commissioners of Alachua County, and Dr. Raymond Harbison, director of interdisciplinary toxicology program of Florida State University and the University of Arkansas Medical School, if there is enough room at the table.

• We will hear from each of you, and then we will have questions at the end.

STATEMENTS OF BERNARD WINDHAM; JOHN SCHROEPFER, CHAIRMAN, ALACHUA COUNTY BOARD OF COUNTY COMMISSIONERS; AND DR. RAYMOND HARBISON, DIRECTOR, INTERDISCIPLINARY TOXICOLOGY PROGRAM, FLORIDA STATE UNIVERSITY

Mr. WINDHAM. I have about 15 years of experience in the solid waste management field, both private and public. The reason I am here, however, is not professional but because of the personal experience of my family with toxic chemical contamination of our well, apparently by a company that operated an old asphalt plant on one of my neighbor's property about 20 years ago.

When they got ready to leave, they dug two pits and buried many cans, drums, all kinds of things that were not to be taken with them when the paving contract was over.

The cans and drums have rusted out, and apparently contained some leftover chemicals used in degreasing equipment and testing asphalt. My family's problems are an example of improper disposal of hazardous waste by a small generator.

Similar cases have occurred in almost all counties of Florida. Virtually all of the considerable hazardous waste generated and disposed of in Leon County is from small generators.

Whatever hazardous waste is not disposed of properly, it always ends up either in ground or surface water. I found out from DER staff that very small amounts of toxic chemicals can pollute large amounts of aquifer at dangerous levels. They calculated that less than five gallons of trichloroethylene would have contaminated over 51 acres of aquifer to levels above safety standards in our case.

After and during a sequence of events, including fertility problems, fertility tests indicating possible chemical changes to sperm cells, and a daughter born with cancer, I made many efforts to find someone to test our water well.

After several rounds of going back and forth between the central and regional office of DER, State HRS, county health department, FSU toxicologists, city of Tallahassee water lab over a period of about 2 years, I finally was able to find someone to test our water; and it was determined that it was contaminated with a highly toxic and carcinogenic chemical, trichloroethylene.

The contamination was at a level approximately 25 times the recommended safety standard. A more detailed description of my frustrations in making those rounds is given in a letter that I wrote over a year ago to Governor Graham.

It was only through extremely time-consuming efforts and much publicity that I was able to get tests done to determine the nature and extent of the water contamination problem in my neighborhood and suggestions about what might be done about it.

My family would have moved except that we had just tied up all of our family savings in buying the property and building a long-planned passive solar home there.

After the publicity of the contamination, there was no chance to sell the home and property at a reasonable price. Several neighbors interested in selling their homes have not been able to find buyers.

Due to the timing and other circumstances, I had to leave my State job while having my daughter's cancer tested and treated in another State, and it was considerable time afterward before I could find another job.

Considerable amounts of my time were taken up trying to get agencies to determine the nature and extent of the pollution problems and what to do about them.

My family still does not have a usable water well on our property after more than 1 year, and no agency has offered to help clean up the pollution. We are currently getting water from a neighbor's well, but my neighbor has been advised that his well will likely be contaminated soon. He has to have it tested regularly and has been advised to find a new source of water.

Both my family and my neighbor, whom we get water from, have been told that if we drill for another water source in this area that we should drill deep and use a special technique, including concrete grouting, as it goes to prevent cross-contamination between aquifer layers.

We have been told this will probably cost about \$15,000 per well and still will not insure a safe supply of water in the long run. There are other nonwell potential sources of cross-contamination in our area. Now as we are investigating drilling a deep well somewhere in our area, we have gotten more bad news. The deep aquifer, Floridan, that we are going to drill into has been found to be contaminated near us by another source.

Gulf State Chemicals has been found to have contaminated the ground water with 21 toxic chemicals. DER geologists informed us that the Floridan aquifer flows in our direction from that site. This is just one more in a series of frustrations in determining what to do in the extent of present and future health problems of my family. It has been a very expensive and emotionally stressful experience for my family.

Now after much research related to my daughter's problems, I have found that toxicologists and epidemiologists have concluded that over 75 percent of birth defects are caused by toxic or environmental factors.

They also have determined that over a period of time sperm count levels in male college students at FSU and across the Nation to be rapidly declining and that the decline is positively related to the amount of toxic chemicals found in sperm. And I have a lot of references on this.

This is in addition to findings that about 90 percent of cancer is environmentally related. This all adds up to the fact that something should be done to clean up current water pollution and prevent future contamination while it is still possible.

Hazardous waste generation is still growing rapidly, especially in growing areas like Florida. It is much cheaper to prevent pollution than to try to deal with the problems after ground water contamination occurs. It is very expensive, if possible at all, to clean up contamination of ground water after it occurs.

It is also becoming more difficult and expensive for municipal water supply and treatment facilities to deal with the problems. Water cannot be treated for toxic chemicals in most cases without extreme expense.

One of the largest parts in preventing toxic waste contamination is education and information. The local government staff that is responsible for solid waste disposal is in the best position usually to monitor and aid in safe disposal of hazardous waste.

The local government staff needs to be educated as to what types of hazardous waste are being generated and disposed of in their area. They also need to be educated on alternatives for handling and disposing of these types of wastes.

They then need to be prepared to give information and technical assistance to companies and individuals in handling hazardous waste, as well as being able to develop cost-effective programs, such as transfer stations and waste exchanges, for aiding in the disposal of hazardous waste.

A hazardous waste survey of the type being carried out for Leon County is the most effective way of determining what types of hazardous wastes are being generated and disposed of in the area.

The only problem with the Leon County survey I know of is that complying with the survey was not made mandatory, and some of the generators have refused to answer questions about what hazardous waste they handle and how they are disposed.

A simple form along with a list of hazardous waste regulated can be developed and distributed similar to the current program described in the Florida House of Representatives bill HB 1129.

Compliance with the survey should be mandatory. Technical information and technical assistance regarding hazardous waste and disposal methodology should be provided to local governments by EPA and State pollution control staffs, as they are in the best position to do the basic research and information compilation required for all of the many types of toxic chemicals.

Regular funding sources related to the problem should be found to implement such monitoring and disposal programs. A tax or charge on regulated toxic chemicals appears to me to be the most reasonable and economically efficient source of such funds. The disposal charge might be graduated depending on degree of hazard.

[The prepared statement of Bernard Windham follows:]

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and carcinogenic chemical (trichloroethylene-TCE). The contamination was at a level approximately 25 times the recommended safety standard. A more detailed discription of my frustrations in finding some agency that would take responsibility for testing my water or in determining what could be done to clean up the problem or get a good source of water is given in my letter of over a year ago to Governor Graham.

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My family still does not have a usable water well on our property after more than a year and no agency has offered to help clean up the pollution. We are currently getting water from a neighbors well but my neighbor has been advised that his well will likely be contaminated soon. He has to have it tested regularly and has been advised to find a new source of water. Both my family and my neighbor we get water from, we have been told that if we drill for another water source in this area that we should drill deep and use a special technique including concrete grouting as it goes to prevent cross contamination between aquifer layers. We have been told this will probably cost about \$15,000 per well and still will not insure a safe supply of water in the long run. There are other non-well potential sources of cross contamination in our area. Now as we are investigating drilling a deep well somewhere in our area, we have gotten more bad news. The deep aquifer (Floridan) that we were going to drill into has been found to be contaminated near us by another source. Gulf State Chemicals has been found to have contaminated the groundwater with 21 toxic chemicals. DER geologists informed us that the Floridan aquifer flows in our direction from that site. This is just one more in a series of frustrations in determining what to do and the extent of present and future health problems to my family. It has been a very expensive and emotionally stressful experience for my family.

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One of the largest parts in preventing toxic waste contamination is education and information. The local governments staff that is responsible for solid waste disposal is in the best position usually to monitor and aid in safe disposal of hazardous waste. The local governments staff needs to be educated as to what types of hazardous waste are being generated and disposed of in their area. They also need to be educated on alternatives for handling and disposing of these types of wastes. They then need to be prepared to give information and technical assistance to companies and individuals in handling hazardous waste as well as being able to develop cost effective programs such as transfer stations and waste exchanges for aiding in the disposal of hazardous waste. A hazardous waste survey of the type being carried out for Leon County is the most effective way of determining what types of hazardous wastes are being generated and disposed of in the area. The only problem with the Leon County survey I know of is that complying with the survey was not made man-

datory and some of the generators have refused to answer questions about what hazardous waste they handle and how they are disposed of. A simple form along with a list of hazardous waste regulated can be developed and distributed similar to the current program described in the Florida House of Representatives Bill—H81129. Compliance with the survey should be mandatory. Technical information and technical assistance regarding hazardous waste and disposal methodology should be provided to local governments by EPA and State Pollution Control staffs as they are in the best position to do the basic research and information compilation required for all of the many types of toxic chemicals. Regular funding sources related to the problem should be found to implement such monitoring and disposal programs. A tax or charge on regulated toxic chemicals appears to me to be the most reasonable and economically efficient source of such funds. The disposal charge might be graduated depending on degree of hazard.

Mr. FUQUA. Thank you very much, Mr. Windham. We will have some questions in a moment.

I would like to ask my colleague, Mr. MacKay, to introduce the next witness and a former constituent of mine.

Mr. MACKAY. Mr. Chairman, it is my pleasure to introduce John Schroepfer, who is currently the chairman of the Alachua County Board of County Commissioners. I think that Mr. Schroepfer is an example of a new breed of elected officials coming into government at the local level who realize that many of these problems can be dealt with in Washington or Tallahassee. And I am pleased that he is here.

They have had some experiences in Alachua County he can tell you about, and I think he has got some very good ideas about the direction we should be going.

Mr. SCHROEPFER. Thank you, Congressman.

Mr. FUQUA. Commissioner, we are glad to have you.

Mr. SCHROEPFER. Thank you, Mr. Chairman. I appreciate the opportunity to be here before you, and most importantly for the fact that local governments are being recognized as an important participant in the programs on all levels of government.

I would like to not belabor too many points that have already been dealt with, but I would like to just turn the thinking upside down for a moment, if I could, and look at it from the perspective of the government that is closest to the people.

It is difficult in Washington to look across the broad spectrum of what the problems are in the nation and still maintain that perspective, and I think at the State level some of that same problem occurs. So I think it is my responsibility to give you a perception from the local level.

We have a significant problem in Alachua County at the present time as a function of hazardous waste mismanagement.

The citizens of Alachua County are presently confronted with a polluted local water source which, because of the nature of the Floridan aquifer, presents regional implications for all of the citizens of North Central Florida and the State of Florida.

For instance, in our community in Fairbanks, the situation is that the ground water has been contaminated through disposal in excess of 1,000 drums of chemicals by the Florida Department of Transportation. The contamination of the ground water occurred in an unlicensed, unregulated landfill operation that was in violation of local zoning statutes, Department of Environmental Regulation and the EPA hazardous waste disposal regulations.

The families of more than 200 residents in the immediate contamination area have been terrorized with not knowing or understanding the full health implications of ingestion of the chemicals, and more than 4 months have elapsed to ascertain that 42 private wells have been contaminated.

The investigations of the groundwater contamination continue, and the anxiety and fears of the residents are not yet quelled.

In addition, in Windsor, a community of Alachua County, we have been confronted with the violation of the EPA regulations by the Federal Government. Chemical wastes labeled as hazardous material and generated at Robins Air Force Base have been transported and stored on private property by an individual without an EPA ID number or status to treat, store or dispose of hazardous waste.

The drummed hazardous waste material was shipped without a hazardous waste manifest. These violations were a direct act by the Defense Property Disposal Service and the Defense Logistics Agency at Robbins Air Force Base.

While action by Alachua County prevented the possible contamination in this instance, the remedial action has been taken by the EPA. The impact of Federal and State hazardous waste mismanagement in Alachua County has reached crisis proportions.

Because of the above two local situations, the county commission and the citizens of Alachua County and staff, and others, have begun to give hours and hours of consideration to the problem of hazardous waste management. We have identified the problems in Alachua County and believe they are not isolated to our local community.

The first problem we have is there is absolutely no determination of how much hazardous waste is present in our community. Neither in the public sector nor the private sector do we feel that there are adequate measures of the magnitude of the problem.

Because of this lack of information, my constituents are confused. They do not understand the magnitude of the problem, they do not understand the reasons we have this problem, and they are confused as to what to do once we have identified the problem. And as all of you know, confused citizens are usually angry citizens.

The second problem is that there is apparently a lack of control or perhaps enforcement or disposal procedures. As I understand it, there are limited procedures for large generators of hazardous waste with respect to their disposal.

But in the case of small generators or people interested in random disposal, there is no control. So not only are there no controls, we are not sure where they dispose of their hazardous waste.

In a regulated situation, we feel that a problem with the permitting process is that it is simply too easy and that approval to be transporters of hazardous waste is too simple.

I have been told, but have not yet confirmed, that a simple letter to the EPA can qualify an individual for hazardous waste disposal. It neither calls for nor mandates training, nor past experience or even familiarity with hazardous wastes.

Another problem of particular concern is there is no regulation concerning small generators. Neither the person that generates nor

the person that transports nor the person that disposes of small amounts of waste are presently controlled.

Finally as it relates to the interactions between the Federal, State, and local governments, we feel that we have no local feedback mechanism through which we are made aware of hazardous waste activities by the Federal, State or, in some cases, adjacent local governments.

One example that my staff presents is that if there was a hazardous waste transport traveling down the main thoroughfare of the city of Gainesville, Florida, my staff nor my commission nor any other citizen would be aware of it. And given the national evidence of spills, derailment and other natural disasters, this is a frightening prospect.

While I have taken the time to make you aware of some of the problems as we see them, I would like to make at this point some suggestions for possible solutions to this problem. I think first of all and utmost is public education.

I believe that the Federal, State, and local agencies have access to information on hazardous waste and should exhaust every opportunity to present this information and make it available on a continuing basis to the public. All agencies must get involved in public education as it relates to hazardous waste because each and every one of us is aware of the dangers of hazardous waste; and we need to begin to address the problem.

We believe that an inventory of hazardous waste is essential and must begin right away. This inventory should include generators, disposers, and should catalog damage already caused by hazardous waste disposal.

Without such an inventory, it is difficult to assess the magnitude of the problem, and it is certainly difficult in the allocation of resources to solve the problem.

You will find attached to a copy of my presentation this morning a proposal before our county attorney at this time, which is a local ordinance drafted to begin at the lowest level of understanding of the conditions that exist with regard to hazardous waste, the very basic understanding of how much is being generated in our community, how it is currently being stored and what is currently being done with it.

On the local level, we are taking direct action to help identify the scope of the problem. I suggest that we need stronger transportation procedures for hazardous waste materials. I believe there are procedures for haulers of significant volume, and there are apparently little, if any, procedures for smaller amounts.

We need to develop a mechanism as soon as possible for the small transports, and we especially need regulations concerning the small generator.

In Alachua County we have large research facilities, large hospital complexes, and a large university, all of which generate some amount of hazardous waste. We need regulation which assures that everyone will adequately and safely dispose of this waste.

Two local issues that we must deal with, and are willing to deal with, as possible solutions are our land use regulations. We must identify where these wastes are stored, and we must identify where these wastes may be disposed of.

I think we all need to work toward establishment of convenient local disposal sites.

I would like to point out that in Alachua County, not one of the largest generators of funds in the country, we have spent over \$70,000 this year in identifying the proper place in our county to dispose of waste in a sanitary landfill and in establishing significant monitoring facilities to test water and the effluent after the disposal of material like this.

I think you have heard from the State level that there is an initiative to impose upon local governments the requirement of siting hazardous waste collection facilities. I would like to point out that I do believe the State is overreacting. I believe, with the proper understanding, local governments will leap to the fore in trying to collect the hazardous waste that is currently being disposed of inappropriately through ignorance and lack of understanding of the dimension of the problem.

I think local governments like mine are willing to begin the first step in the collection of data base that you and the State governments need to identify the dimension of the problem. That is the purpose of our local ordinance.

I wish to commend Dr. Herndon for his forthright efforts in this area, especially throughout the State, as evidenced here in Tallahassee.

And I would like to point out that the Gators are right up with the Seminoles with regard to identifying dimension of hazards. I will be glad to answer any questions you might have, Mr. Chairman.

[The prepared statement of John Schroepfer follows:]

ALACHUA COUNTY BOARD OF COUNTY COMMISSIONERS

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County Administrator

Dennis Long
County Attorney

May 13, 1983

TO: U.S. House of Representatives
Committee on Science and Technology

FROM: John J. Schroeffer, Chairman
Alachua County Board of County Commissioners

SUBJECT: Testimony to Improve Governments' Hazardous
Waste Regulatory Programs

I would like to take this opportunity to thank the Subcommittee member for inviting local representatives like myself to testify on such a vitally important issue before the nation, and particularly before the citizens of Alachua County, regarding hazardous waste regulatory programs and hazardous waste mismanagement.

I have come to Tallahassee not out of a need to discuss my philosophical point of view on hazardous waste management and disposal, but I am here because we have a significant problem in Alachua County at the present time as a function of hazardous waste mismanagement. The citizens of Alachua County are presently confronted with a polluted local water source which because of the nature of the Florida Aquifer presents regional implications for all of the citizens of North Central Florida and all of the State of Florida. For instance, in our Community in Fairbanks, the situation is that the groundwater has been contaminated through disposal in excess of 1,000 drums of chemicals by the Florida Department of Transportation. The contamination of the groundwater occurred in an unlicensed, unregulated landfill operations and was in violation of local zoning statutes, Department of Environmental Regulation and the Environmental Protection Agency hazardous waste disposal regulations. The families of more than 200 residents in the immediate contamination area have been terrorized with not knowing or understanding the full health implications of ingestion of the chemicals and more than 4 months have elapsed to ascertain that 42 private wells have been contaminated. The investigation of the groundwater contamination continue and the anxiety and fear of the residents is not quelled.

In addition, in the Windsor Community of Alachua County, we have

P.O. Drawer CC

Gainesville, Florida 32602

(904) 374-5210

been confronted with violations of the Environmental Protection Agency regulation by the Federal Government. Chemical wastes labeled as hazardous material and generated at Robins Air Force Base have been transported and stored on private property by an individual without an Environmental Protection Agency I.D. number or status to treat, store or dispose hazardous waste. The drummed hazardous waste material was shipped without a hazardous waste manifest. These violations were a direct act by the Defense Property Disposal Service and the Defense Logistics Agency at Robins Air Force Base. While action by Alachua County prevented the possible contamination in this instance and remedial action has been taken by the Environmental Protection Agency, the impact of Federal and State hazardous waste mismanagement in Alachua County has reached crisis proportions on occasions.

Because of the above two local situations, the County Commission, the citizens of Alachua County, the County staff, and others, have begun to give hours and hours of consideration to the problem of hazardous waste mismanagement. We have identified the following problems in Alachua County and believe they are not isolated in our community.

The first problem we have is there is absolutely no determination of how much hazardous waste is present in our community. Neither in the public sector nor the private sector do we feel there are adequate measures of the magnitude of the problem. Because of this lack of information, my constituents are confused. They do not understand the magnitude of the problem, they do not understand the reasons we have this problem, and they are confused as to what to do once we have identified a problem. And, as all of us know, confused citizens are usually angry citizens.

The second problem is that there is apparently a lack of control or perhaps enforcement on disposal procedures. As I understand it, there are limited procedures for large generators of hazardous waste with respect to their disposal procedures. But in the case of small generators or people interested in random disposal, there is no control. So not only are there no controls, we are not sure where they dispose of their hazardous waste.

In a related situation we feel that a problem with the permitting process is that it is simply too easy and that approval to be a transporter of hazardous waste is too simple. I have been told but have not yet confirmed that a simple letter to the Environmental Protection Agency can qualify an individual for hazardous disposal. It neither calls for nor mandates training, past experience, or even familiarity with hazardous waste. Another problem of particular concern is that there are no regulations

concerning the small generator. Neither the person that generates, nor the person that transports, nor the person that disposes of small amounts of waste are presently controlled.

Finally, as it relates to the interaction between the federal, state and local governments, we feel that we have no local feedback mechanism through which we are made aware of hazardous waste activities by the federal, state or in some cases, adjacent local governments. One example that my staff presents is that if there were hazardous waste traveling down the main thoroughfare of the City of Gainesville, Florida, in Alachua County, my staff nor my Commission, nor any citizen would be aware of it. And given the national evidence of spills, derailments, and other natural disasters this is a frightening prospect.

While I have taken the time to make you aware of some problems as we see them, I would like to simply make, at this point, some suggestions for possible solutions to this problem. I think first of all and uppermost is public education. I believe that all federal, state and local agencies who have access to information on hazardous waste should exhaust every opportunity to present this information and make it available on a continuous basis to the public. All agencies must get involved in public education as it relates to hazardous waste because until each and every one of us is aware of the dangers of hazardous wastes will we be able to begin to address our problem.

We believe that an inventory of hazardous waste is essential and must begin right away. This inventory should include generators, disposers, and should catalog damage already caused by hazardous waste disposal. Without such an inventory, it is difficult to assess the magnitude of the problem, and it is certainly difficult in the allocation of resources to solve the problem. Attached as Exhibit "A" to this presentation is the outline of an ordinance being drafted by Alachua County to meet this need. I suggest that we need stronger transportation procedures for hazardous waste materials. I believe there are procedures for haulers of significant volume, but for the disposal of small amounts of hazardous waste, there are apparently little, if any, procedures. We need to develop a mechanism as soon as possible for the small transports, and we especially need regulations concerning the small generator. In Alachua County where we have large research facilities, large hospital complexes, and a large university, all of which generate some amount of hazardous waste, we need regulations which assure that everyone will adequately and safely dispose of this waste.

Two local issues that we must deal with, and are willing to deal with, as possible solutions, are that our land use regulations must address hazardous waste management. We must identify where these wastes are stored, and we must identify where these wastes may be disposed of. I think we all need to work toward the establishment of convenient disposal sites so that it will not only be cost efficient to dispose of waste in a safe manner, but is convenient so that all of our citizens will be willing to dispose of their waste in the most appropriate fashion.

Attachment (Exhibit A)

EXHIBIT "A"

PROPOSAL FOR ORDINANCE REGULATING
HAZARDOUS WASTE IN ALACHUA COUNTY

INTRODUCTION:

Despite federal and state regulatory efforts, hazardous waste mismanagement continues to occur throughout the United States. Although this mismanagement occurs in cities and counties, there is still no well-defined role for local government in the overall national or state programs. Many local governments throughout the country are recognizing the need to take actions that complement regulatory efforts at the federal and state levels; however, individual local government activities are uncoordinated, often fragmented, and generally are costly. Successfully implemented local government hazardous waste programs improve both the efficiency and effectiveness of state and federal regulatory programs by identifying, controlling, and assisting generators (especially the smaller generators) of hazardous waste.

While state and federal regulatory efforts are generally focused on the larger generators, local governments can concentrate efforts on smaller hazardous waste generators. This emphasis on smaller quantity generators will help prevent the development of future problem landfill sites that require costly cleanup activities. In many communities throughout Florida, smaller generator waste is being deposited and accumulated in municipal sanitary landfills. These landfills then become tomorrow's problem sites. Expenditures to implement local government hazardous waste management programs are small in comparison with the dramatic costs to clean up future problem sites.¹

OBJECTIVES OF ORDINANCE

> Generally, regulate those hazardous waste generators in Alachua County which are not presently covered by or subject to state or federal regulatory statutes and/or subject to state or federal regulatory agency jurisdiction in the following manner:

1. Identify existing hazardous waste generators.
2. Identify existing hazardous waste storage facilities.
3. Require permit to generate and/or store hazardous materials.
4. Require periodic reporting of activities.

¹Excerpt from concept paper, Herndon, Ray C. & Moerlius, John E., "Development of Local Government Hazardous Waste Management Progress", Institute of Science and Public Affairs, Florida State University, March 24, 1983.

5. Impose fee, charge, or tax to support regulatory activities.

6. Impose a penalty for violation.

> Specifically, address the underground storage and transmission facility problem.

CONTENT

> Define hazardous waste; generators and stockpilers of hazardous waste; and structures or facilities subject to regulation.

> Impose permitting requirement.

> Require state of the art monitoring procedures and/or devices to be utilized.

> Require reporting of information.

> Impose fee or tax.

> Provide for penalty.

SCHEDULE FOR ADOPTION

> Initial draft, July 8, 1983 by County Attorney's Office.

> Review by Public Works Department, Planning and Development Department, Codes Enforcement Department, and Pollution Control Department.

> Meeting by July 22, 1983, for comments, revisions, etc.

> If agreement on definition of hazardous waste generators and/or stockpilers, initiate preliminary inventory throughout County to determine scope and impact on Alachua County.

> Revised draft: two weeks after meeting.*

> Review by above departments of county government, plus citizens, public interest groups, etc.*

> Meeting by August 12, 1983, for comments, revisions, etc.*

> Final draft one week later.*

> Submission to Board of County Commissioners for authorization to advertise and submit to Local Planning Agency for review.*

> Public hearing on whether or not to adopt ordinance.*

*The inventory process may require additional revisions, review, or modifications which will cause readjustment of schedule to later dates.

Mr. FUQUA. Thank you, John. We will hear from Dr. Raymond Harbison, and then we will have some questions that probably all of you might want to interact with.

Dr. Harbison.

Dr. HARBISON. Thank you, Mr. Chairman.

I would like to preface my statement by endorsing the comments that Dr. Herndon made earlier. Local government hazardous waste management and training programs are imperative because it is the local personnel that are frequently in a position to influence these management concerns on a daily basis.

With the advent of extremely sensitive modern analytical methods of evaluation of environmental samples, it has become clear that environmental exposure to toxic contaminants is much more pervasive than previously had been suspected.

The magnitude and diversity of this exposure has increased in recent years and continues to grow as a result of mismanagement of waste materials from a variety of sources. These include accidental spills, intentional industrial discharge or disposal and the unregulated disposal of materials in sanitary landfills.

Industrial waste management for larger generators has come under intense scrutiny by Federal and State regulatory agencies as well as by the firms themselves. However, management of the smaller quantity generators has particularly been less well controlled.

The wide variety of the smaller quantity waste from local service industries and manufacturing firms frequently includes heavy metals, inorganic compounds, chlorinated solvents and other organic chemicals, pesticides, contaminated containers from all of these categories, all of which represent, or may represent some form of hazard.

Although we now have many examples of exposures to these compounds, in many cases adequate testing has not been conducted to determine the toxic characteristics.

Short-term, high-level exposures resulting in acute effects have been characterized for some compounds of environmental concern. However, the chronic or long-term exposure to these and other substances has been established only for a very few of these substances.

The teratogenic, the mutagenics, the cancer-causing agents often exert their effects at exceedingly low doses.

In addition, exposures to multiple compounds, such as cancer-causing agents and promoting agents, may produce additive or synergistic levels of response.

Finally, unlike the acute effects, the chronic effects of the compound may not become evident for many years, long after it is possible to establish definitive cause and effect relationships between exposure and the results.

One approach to formulation of such strategies involves risk assessment. This process assigns probabilities to the likelihood of particular health effects—for example cancer—and relates these effects to specified exposure levels and duration of exposure.

This technique has been refined and expanded in comparison with similar methods used for calculation of safe occupational exposure levels. An advantage of this approach is its ability to accom-

moderate multiple variables in arriving at its assignment of risk as opposed to more limited yes-no decision models.

With appropriate application, this technique could provide local officials with a powerful tool for waste management decisionmaking.

At the present time, sufficient information does not exist to apply risk assessment techniques to evaluation of hazards posed to groundwater supplies by landfill disposal of hazardous waste.

As a result, it is important to provide local governments with the necessary resources to properly evaluate and manage their hazardous waste programs. They must carefully investigate the types of materials and wastes involved and determine sources, volumes and alternatives if land disposal were available.

These data will allow for the appropriate determination of areas of concern.

Until this information is collected, a course of action should be chosen which best protects the public from toxicological consequences of uncontrolled disposal of even small quantities of these hazardous compounds.

During the past 4 to 5 years, I have been working with the U.S. Department of Justice in enforcement actions of a variety of hazardous wastes or uncontrolled waste site problems; and I think only recently have we begun to look at the leachate, for example, and the discharge coming from sanitary landfills, which is remarkably similar to those of the large, uncontrolled waste sites which we have considered major problems in the past.

So I think as Dr. Herndon and Secretary Tschinkel have already emphasized, the importance of controlling and informing persons of the problems associated with disposal of unknown materials in sanitary landfills is imperative, and could in fact significantly impact the public health in those areas. Thank you.

Mr. FUQUA. Thank you very much, Dr. Harbison.

Mr. Windham, you think that if the assessment program that Dr. Herndon has been working on, had been in effect several years ago, that it would have probably prevented the problem that you have faced personally with hazardous wastes?

Mr. WINDHAM. I think more than likely it would have. I hear the kind of thing that happened in our area was commonplace, that they did this by—that is the way they do it in almost all cases and it is just a matter of knowledge of what the materials are and what are the proper ways of disposing.

I think that there is a good chance that, especially considering that it was under the oversight of the Department of Transportation, that if you had this kind of thing and more knowledge, that it would have been avoided.

Mr. FUQUA. Mr. Schroepfer, what do you envision as the proper role of local governments, such as county and, in some cases, probably city governments?

Mr. SCHROEPFER. I think it is clearly to provide the data base to understand the dimension of the problem. I think what we have heard today is a reiteration of the same issue, and that is we are just now beginning to catch up with the errors of the past.

I think we can approach it in two ways. One is dangerous and the other one I think is clearly the best. The dangerous way is to

helter-skelter run around and try to patch up the holes that have already been dug. I think there is some merit to doing some of that, but I think we need to learn by that mistake and move forward.

Clearly, what we did not do correctly in the past was identify the dimension of the problem and the number of generators and educate those generators in their role to participate in the maintenance of a clean environment.

I think clearly local government is closest to that, can do the education, could do the survey, could generate the data base; and then we can deal with the dimension of the problem once we know what it is.

I think we have a twofold—or you have a twofold problem. I think our responsibility is to give you the information needed to understand the dimension of a cure for the future.

Mr. FUQUA. Mr. MacKay.

Mr. MACKAY. Mr. Chairman, I think the outlines of Florida's problem are becoming clear from this testimony. Mr. Schroeffer has talked about hazardous waste problems caused to local government, one of them by a Federal agency, the Department of Defense, which apparently either didn't know about the regulations of the EPA or else chose to ignore them, and a problem caused by the Florida Department of Transportation, and which like a lot of other generators of hazardous waste, couldn't figure out what to do with it so they buried it.

Now, in both of those cases, local government is fortunate because there is another agency there willing to take—maybe not willing, but capable of being coerced into taking the responsibility.

Mr. Windham, on the other hand, points to the other problem, which is a hazardous waste problem caused by someone who has left or else is capable of declaring bankruptcy, and local government gets stuck with the tab. That is what happened in south Marion County, in Belleview, where a local filling station had a tank rupture and the entire city of Belleview had to go on a different water supply, and they ended up incurring several hundred thousand dollars of costs.

Now, the question I would like to ask is, how do you see the role of local government, Mr. Schroeffer, in solving this problem? It appears to me you are the government of last resort. Now, you said you are on the first line. You are also the one who, in a different forum, would be called the one who is holding the bag.

Mr. SCHROEPFER. That is true, Congressman MacKay, and I think we are the first ones to get the finger pointed at us.

I am the one that is sitting at the Fairbanks meetings hearing the citizens upset and having the absolute frustration impact me in that small church room. And the frustration is magnified by the fact that if it were not for the resources of DOT and their willingness to get the situation turned around, we would be at a loss. It would be impossible fiscally for us to deal with the dimension of that problem.

Now, the other side of the coin is that because DOT is spending money cleaning up the dump site, I really can't say I can point any malicious intent to. It is ignorance, that is all.

I think that what happens is that money is not going to go to roads in our community. And there is a ripple effect as a product of this.

If we don't identify resources from a larger base of available funds, there is going to be a community, like Belleview, who is not going to have a rescue unit to save somebody's life, or there is going to be a community like Alachua County or Gainesville that would have to give up some very vital local service to accommodate this need.

I think the regional impact leads you to look to the State, and the State is also having a resource balancing act and they are looking to the Federal Government.

I think local government in identifying the dimension of the problem and recognizing the limits of their resources can help emphasize for you gentlemen the responsibility that the State and Federal governments have to at least have a reserve of money to deal with the potential of uncovering something that local resources can't help with.

Mr. MACKAY. Dr. Harbison, you made the comment that to me is very thought provoking, and that is that as you begin to measure the leachates from sanitary landfills, you discover that they are not very sanitary after all; that their leachates look very much like what is coming out of unregulated hazardous waste dumps.

Dr. HARBISON. Yes, sir. In our recent evaluation of sanitary landfill leachates, they don't look all that dissimilar. I think we have to remember that the industrial chemicals that are manufactured ultimately go into household products and other things that we all use.

For example, a drain cleaner contains trichloroethane or trichloroethylene, which is a major concern of water contamination. I think that most people would have no hesitancy in either throwing away a can of that material or certainly putting it into a sanitary landfill.

When thousands of people in a community do that and it percolates down into the leachate water, it ultimately gets into the ground water. And we can go on with a whole variety of other products, like oven cleaners, pesticides, a whole variety of things that we all use.

So I think as everyone pointed out so far, it is an education problem and it is a discipline problem for us individually as well as local communities.

Mr. MACKAY. I would gather from what you are saying that we need to educate not only local government, but you might say the small business community, and assume that if they understood the consequences of what is happening now, if all of us understood it, then we would become sufficiently concerned to begin to amend our ways.

Dr. HARBISON. Yes, sir. I think it is most important that the small business community be informed and told of this problem.

Cyanide waste, for example, from small electroplating operations—in all small communities, there are small electroplating operations—all these things ultimately end up in some part or another in a sanitary landfill. And we need the cooperation of those folks and we need to inform them.

Mr. MACKAY. So local government is holding the bag in a different sense of the word, in that if we don't change what we are doing now, the next generation's hazardous waste sites are going to be this generation's sanitary landfills?

Dr. HARBISON. Yes, sir. I think that is probably the case.

Mr. MACKAY. That is an interesting, and kind of frightening, conclusion.

Mr. Chairman, I know we have got a time constraint, but I would like to say that this, to me, is sort of the epitome of a federalism kind of problem because we have got a law now that has imposed a solution from the top down, and it is said nationally if we can get people who generate above 1,000 kilograms a month or 1,000 something-or-others a month, we will have solved 90 percent of the problem. And so by doing it that way, local government has never been involved.

Now we have got those people, and we are beginning to discover that the problem is not solved at all.

It seems to me that for the second phase we ought to be inquiring as to how we could orient our resources and that local government be on the point and let State and Federal Government, in effect, be in an assisting role.

I guess that is what you were saying, Mr. Schroepfer, when you said that you were afraid the State was about to overreact.

Mr. SCHROEPFER. I think that is true. I think I wanted to correct the impression that there was a necessity for the State to move in and deal with irresponsible local governments that weren't willing to accept hazardous waste collection facilities.

I think the problem is local governments and local people do not understand the dimension of the problem. I think one way to bring that home is local ordinances that say everybody who generates any kind of hazardous waste material must register with us, tell us what they are generating and what they are doing with it.

Not that it will automatically stop all the problems, but it will begin the educational process and raise the awareness level of the public who, I think, are very moral and are willing to react favorably to whatever regulations will help keep their water clean.

I think for the Library of Congress to print endless volumes about what is hazardous waste is not going to be generally effective to the local dry cleaner.

If he has to go down to the courthouse and register once a year and outline what he is doing with it and what he has got, he will realize that is a problem and he will begin to respond appropriately.

I have a lot of faith in our citizens and our local governments, and I think that is the place where this kind of information is going to funnel past; and I think there are some places where resources will not allow that, either financial or influential resources.

I think if the Federal Government were to turn its regulatory eye down to this level, I think we can find ourselves working hand-in-hand to solve the problem.

Mr. MACKAY. Thank you, Mr. Chairman.

Mr. FUQUA. Mr. Lewis.

Mr. LEWIS. Just one question, Mr. Chairman.

Mr. Windham, what is the extent of your financial burden due to the contamination found on your property?

Mr. WINDHAM. It is very considerable. We have had to go to another State and have treatment of my daughter, like I said, and that was expensive both in terms of my being away from my job for a while and the medical expenses and staying in motels and flying and things like this.

But in terms of the site situation, already I have had to find water from a neighbor and carry a line over about 500 feet to a neighbor's well and pipe water over from his well, which was pretty expensive.

But to drill a new well, like I said, would cost about \$15,000, according to the method that they want me to do to keep from cross-contaminating the aquifer; and even that will not insure that I have safe water over a period of time.

Also, the loss and profit value. In other words, my whole area there, where the water is contaminated, you can't develop property there anymore. All the people who are trying to sell can't find buyers and that will probably last for a considerable period of time.

So, overall, it has been very financially straining and it is not solved yet.

Mr. LEWIS. Thank you, Mr. Windham.

Mr. Chairman, I think Mr. Schroeffer and Dr. Harbison have answered my questions. Thank you.

Mr. FUQUA. Thank you. We thank you, Mr. Windham, for being here.

Mr. Schroeffer, we appreciate your contribution.

Dr. Harbison, thank you very much for being here.

We will take about a 5-minute break and then return.

[Recess.]

Mr. FUQUA. If we could get started again. Our panel from the regulatory side is Mr. Larry Hyde and Mr. Al Smith from the Environmental Protection Agency regional office in Atlanta, Ga. Would they please come forward?

We are very happy to welcome you two gentlemen. We will begin with you, Mr. Hyde, and then Mr. Smith.

STATEMENTS OF LAWRENCE HYDE, ENVIRONMENTAL PROTECTION AGENCY REGIONAL OFFICE, ATLANTA, GA; AL SMITH, ENVIRONMENTAL PROTECTION AGENCY REGIONAL OFFICE, ATLANTA, GA

Mr. HYDE. Good morning, Mr. Chairman, and members of the subcommittee. I am Lawrence J. Hyde, program specialist in the air and waste management division of the Environmental Protection Agency.

My duty station is the Atlanta regional office. I am pleased to be here today to give a statement on the status of Superfund training in region IV.

My role as a division training officer involves coordinating training in the air, solid waste, pesticides and hazardous waste programs for the States in region IV.

I am also responsible for the in-house training programs for the 160 employees of the Air and Waste Management Division. Since

becoming involved in the training of Superfund personnel, most of my time is now spent in this area. I find it to be the biggest challenge of my 26 years of Government work.

The Comprehensive Environmental Response, Compensation and Liability Act of 1980, CERCLA, better known as Superfund, is not specific on the subject of training for Federal and State employees working in Superfund-related jobs.

Thus, identifying resources for this training presents a problem. In region IV we have overcome this obstacle by doing the following: utilizing regional personnel; when available, assigning the field investigation team and/or the technical assistance team to develop and conduct training courses; identifying other Federal and State agencies that have training opportunities that meet our needs and are willing to allow Federal and State participation at no cost to us or to the State; encouraging States to develop their own training programs with our assistance; taking advantage of the national courses conducted by EPA's emergency response team in Cincinnati, Ohio, and Edison, N.J.

By taking these steps, we have had some success in this region in providing safety and technical training to the States, but because of the magnitude and complexity of the situations that arise, more work needs to be done to adequately train State personnel who work in Superfund-related jobs.

Our objectives in region IV are to improve the capability of State and local response personnel by providing training to improve their technical skill development, incident management, and program administration.

During the past two years, we have conducted and/or provided to the States of region IV 27 courses on safety and technical training.

These include: emergency response management, hazardous incident training, waste site sampling, personnel protection and safety, field monitoring and sampling of hazardous materials, pesticides and hazardous chemicals, toxicological evaluations and risk assessment, and incident mitigation and treatment methods.

In these 27 courses, 779 Federal and State employees received training. These figures do not include our participation in weekend training sessions for fire and police departments and civil defense.

These presentations are made by the regional emergency response team staff. According to our records, 23 presentations were made to an audience of approximately 1,300 people. During 1982, I served as representative of regional interests on a headquarters Superfund task force to assess training needs, to improve management of the training program and to plan for the use of resources.

Under the new training strategy, Superfund can provide resources for both internally and externally administered training programs.

EPA has begun to plan, strategically, its Superfund training activities. Since fiscal year 1982, CERCLA funded programs have been providing training on Superfund-related topics.

OERR has been providing training through the environmental response branch of the hazardous response support division.

Other Federal agencies, through interagency grants with EPA, have independently developed and delivered Superfund-related training.

In early fiscal year 1983, a preliminary strategic plan for fiscal year 1984 was developed that will enhance program management and will continue to utilize EPA and other agencies to provide Superfund-related training.

EPA will continue to provide or to direct the provision of Superfund instruction through three training initiatives. First, EPA will utilize its existing training program as the foundation for the continued provision of safety and technical instruction.

The primary audience is Federal and State CERCLA-involved employees. The secondary audience is local and private CERCLA-involved employees.

Second, EPA will begin a new program to provide specialized instruction to CERCLA-involved State employees based on particular State needs.

Training opportunities would include topics such as contingency planning, contract management, technical mini-courses, and on-the-job training.

EPA will direct a program delivered by FEMA that will provide training to first responders involved in Superfund actions.

Third, EPA will continue to provide funding through IAG's to other Federal agencies for Superfund-related training. Since fiscal year 1982, five other Federal agencies have received CERCLA funding for training purposes.

Although the funding was initially for a program to train their own employees, at least two agencies, the Health and Human Services and FEMA, have proposed to offer training to State and local employees.

Implementing the new training initiatives will present a number of important management challenges: integrating greater planning emphasis into the program; managing an expanded training program without additional staff resources; negotiating advantageous agreements with training provided for the first responder program; developing regional training plans for targeted State training programs; designing effective program oversight and monitoring capability for non-EPA directed training; making appropriate arrangements with States for targeted and first responder program; and insuring that implementation work is completed prior to fiscal year 1984.

While we are still in the early stages in implementing these initiatives, it is apparent that institutions such as the Florida State University may be able to play an important role in the development, delivery, or direction of these efforts.

Specifics as to pilot projects and funding levels cannot be produced now until we go a little further in planning.

In closing, I want to say that without the complete support of Mr. Tom Devine, director, air and waste management division and Mr. Al Smith, chief, emergency and remedial response branch, the training accomplishment discussion here today would not have taken place.

These two gentlemen recognize the need for trained State and local personnel and are dedicated to help get the job done.

I thank you for this opportunity and will be happy to answer any questions you may have.

[The prepared statement of Mr. Hyde follows:]

STATEMENT OF
LAWRENCE J. HYDE
PROGRAM SPECIALIST
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
AIR & WASTE MANAGEMENT DIVISION
REGION IV
BEFORE THE
SUBCOMMITTEE ON NATURAL RESOURCES, AGRICULTURE
RESEARCH AND ENVIRONMENT
COMMITTEE ON SCIENCE AND TECHNOLOGY
HOUSE OF REPRESENTATIVES

MAY 16, 1983

Good Morning, Mr. Chairman and members of the Subcommittee. I am Lawrence J. Hyde, Program Specialist in the Air and Waste Management Division of the Environmental Protection Agency. My duty station is the Atlanta Regional Office. I am pleased to be here today to give a statement on the status of Superfund training in Region IV.

My role as a Division Training Officer involves coordinating training in the Air, Solid Waste, Pesticides and Hazardous Waste Programs for the States in Region IV. I am also responsible for the in-house training programs for the 160 employees of the Air and Waste Management Division. Since becoming involved in the training of Superfund personnel, most of my time is now spent in this area. I find it to be the biggest challenge of my 26 years of government work.

The Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), better known as Superfund, is not specific on the subject of training for Federal and State employees working in Superfund-related jobs. Thus, identifying resources for this training presents a problem. In Region IV we have overcome this obstacle by doing the following.

- Utilizing Regional personnel.
- When available, assigning the Field Investigation Team (FIT) and/or the Technical Assistance Team (TAT) to develop and conduct training courses.
- Identifying other Federal and State agencies that have training opportunities that meet our needs and are willing to allow Federal and State participation at no cost to us or the State.
- Encouraging States to develop their own training programs with our assistance.
- Taking advantage of the national courses conducted by EPA's Emergency Response Team in Cincinnati, Ohio, and Edison, New Jersey.

By taking these steps we have had some success in this Region in providing safety and technical training to the States. But because of the magnitude and complexity of the situations that arise, more work needs to be done to adequately train State personnel who work in Superfund-related jobs.

Our objectives in Region IV are to improve the capability of State and local response personnel by providing training to improve their technical skill development, incident management and program administration.

During the past two years, we have conducted and/or provided to the States of Region IV, 27 courses on safety and technical training. These include:

- ° Emergency Response Management
- ° Hazardous Incident Training
- ° Waste Site Sampling
- ° Personnel Protection and Safety
- ° Field Monitoring and Sampling of Hazardous Materials
- ° Pesticides and Hazardous Chemicals
- ° Toxicological Evaluations and Risk Assessment
- ° Incident Mitigation and Treatment Methods

In these 27 courses, 779 Federal and State employees received training. These figures do not include our participation in weekend training sessions for fire and police departments and Civil Defense. These presentations are made by the Regional Emergency Response Team staff. According to our records, 23 presentations were made to an audience of approximately 1300 people.

During 1982, I served as representative of Regional interests on a Headquarters Superfund task force to assess training needs, to improve management of the training program, and to plan for the use of resources. Under the new training strategy, Superfund can provide resources for both internally (EPA) and externally (other agency) administered training programs.

EPA has begun to plan strategically its Superfund training activities. Since FY 1982, CERCLA funded programs have been providing training on Superfund-related topics. OERR has been providing training through the Environmental Response Branch (ERB) of the Hazardous Response Support Division (HRSB). Other Federal agencies, through inter-agency grants (IAGs) with EPA, have independently developed and delivered Superfund-related training. In early FY 1983, a preliminary strategic

plan for FY 1984 was developed that will enhance program management and will continue to utilize EPA and other agencies to provide Superfund-related training.

EPA will continue to provide or to direct the provision of Superfund instruction through three training initiatives. First, EPA will utilize its existing training program as the foundation for the continued provision of safety and technical instruction. The primary audience is Federal and State CERCLA-involved employees; the secondary audience is local and private CERCLA-involved employees. Second, EPA will begin a new program to provide specialized instruction to CERCLA-involved State employees based on particular State needs. Training opportunities would include topics such as: contingency planning; contract management; technical mini-courses; and on-the-job training. EPA will direct a program delivered by FEMA that will provide training to first responders involved in Superfund actions.

Third, EPA will continue to provide funding (through IAGs) to other Federal agencies for Superfund-related training. Since FY 1982, five other Federal agencies have received CERCLA funding for training purposes. Although the funding was initially

for a program to train their own employees, at least two agencies -- Health and Human Services and FEMA -- have proposed to offer training to State and local employees.

Implementing the new training initiatives will present a number of important management challenges.

1. Integrating greater planning emphasis into the program.
2. Managing an expanded training program without additional staff resources.
3. Negotiating advantageous agreements with training provided for the first responder program.
4. Developing regional training plans for targeted State training programs.
5. Designing effective program oversight and monitoring capability for non-EPA directed training (IAGs).
6. Making appropriate arrangements with States for Targeted and first responder program.
7. Ensuring that implementation work is completed prior to FY 1984.

While we are still in early stages in implementing these initiatives, it is apparent that institutions such as Florida State University (FSU) may be able to play an important role in the development, delivery or direction of these

efforts. Specifics as to pilot projects and funding levels cannot be produced now until we go a little further in planning.

In closing, I want to say that without the complete support of Mr. Tom Devine, Director, Air and Waste Management Division; and Mr. Al Smith, Chief, Emergency and Remedial Response Branch, the training accomplishment discussion here today could not have taken place. These two gentlemen recognize the need for trained State and local personnel and are dedicated to help get the job done.

I thank you for this opportunity and will be happy to answer any questions you may have.

Mr. FUQUA. Thank you very much, Mr. Hyde.

Mr. Smith.

Mr. SMITH. Mr. Chairman, and members of the subcommittee, I do not have a prepared statement. I apologize to this distinguished panel and the press for not having provided one.

I simply have been traveling every day, even Saturdays and Sundays, over the past week, trying to discuss with local governments in cities like Memphis and Nashville, and even outside region IV, the very things that you are so concerned about here.

My statement will be very brief in that I support what Mr. Hyde has said about the training needs and something a little about our successes in region IV in trying to get around to our States and local governments and trying to train them in the area of Superfund.

For the record, I am the Superfund coordinator in region IV. I manage all of region IV EPA's emergency programs, and have since about 1967 or so.

We don't envision, really, any problem in us continuing this training effort, even accelerating it at all possible.

However, as Mr. Hyde has already said, Superfund is not clear and specific about the amount of dollars that can go that way.

So this kind of effort that you put forth here may very well help us to be able to get the money we need and develop the kinds of programs that State and local governments need.

I can also try to answer any of your questions dealing with Federal, State, local interface, any operations of the Superfund programs.

I have to be very careful to distinguish for you that I do not work in the hazardous waste program EPA, which is the RCRA program,

resource conservation recovery. But anything else I would try to help with, and I thank you very much for this opportunity.

Mr. FUQUA. Thank you very much, Mr. Smith. Do either of you feel that we have adequate knowledge now of how to dispose of all of the wastes, or must we continue to support the research activities to better understand the chemical properties of some of the wastes and also the disposal activities involved?

Mr. SMITH. Yes, sir. I will try to answer the operational type questions like that that are divergent from trainings, per se.

Yes, sir. I think we do have to support research in this sense. It has to be meaningful research that delivers products for us.

To move a mountain from Tennessee to Alabama, 11,000 drums of dirt. Our technology just simply doesn't exist to try to refine our collection system as far as in the hazardous waste business. We run into emergencies, for instance.

We find that we clean up obese areas of materials and put them in transportation and take them to secured land fills. The siting question is a big one.

I don't know how financially inadequate that is and how much of a burden it is nationally, but it is a problem. I think what we need to try to do is develop ways to concentrate what we move from one place to another.

Mr. FUQUA. Has it been your experience—and either one of you can answer it—has it been your experience that there is a role for local governments in this rather than just to be totally dominated by the Federal or the State governments?

Mr. HYDE. Yes, sir. I will try to speak to that.

I happen to be in Tallahassee today to meet with the Florida staff for the purpose of planning next year's training. One of the things that we are going to be encouraging States to do is to encourage local governments to put together contingency plans.

A contingency plan cannot be developed without existing problems being recognized and/or identified. We have recently been working with the city of Lexington, Ky., on a city-county contingency plan for hazardous materials. The last vote to adopt this plan will come up next month.

If that proposed plan stays intact, we probably will use that as a model for all the communities around region IV. Mr. Smith has worked a great deal with those people.

Mr. SMITH. Let me add a caveat to that, please, sir. June 7, the metro Lexington County government will vote on something that I think is unique.

A lot of people discuss that local contingency plans are available. Frequently they speak to national emergencies, floods, hurricanes, the things that we all know about.

These two specific laws that Lexington will try to enter on their books will, in fact, have the effect of law. There will be local ordinances, and they will identify local officials who can speak for the county in emergencies.

But even more important, they address the issue of prevention. When it comes to prevention of emergencies, prevention of spills, prevention of having to pitifully dispose of a hazardous waste, I don't see how in the world that that isn't probably the best motherhood and apple pie situation I can think of.

Nothing is better spent than the prevention dollar. It benefits industry, government and, most of all, the people that we all regulate and try to protect, the public.

So that prevention ordinance that Lexington is trying to develop, I think it is one of the most important things I have seen come along in a long time; and it emphasizes that not only do they have the spectrum of interest of developing data base, but also their own local enforcement.

They are going to use housing inspectors, for instance, to go and visit industries and look for contingency plans. If they are not available, they will be put in some form of violation.

That supplants the need of the Federal Government getting involved in that spectrum of local government, and I think that is profoundly interesting.

Mr. FUQUA. I am glad to hear you say that in the contingency plan it considers, and I hope it emphasizes, prevention, because we don't need a contingency plan just to cover all of our mistakes all the time. I hope we can look ahead and prevent those contingencies from happening.

If that is what, as I understand it, you are working in that direction, let me applaud you for doing that, because I think that is what we are trying to do, is prevent these things from happening.

We have enough already we have to clean up. But, hopefully, we can prevent them from happening in the future.

Mr. SMITH. I agree with you, sir.

Mr. HYDE. May I speak to what is the magnitude of what we are trying to do in training?

We have a core group of 30 to 35 people in the States of region IV who need technical training. There are first responders, such as policemen, firemen, and civil defense personnel who have a need for training in hazardous materials, city and county officials need training in public awareness.

In the eight States that I work with, there is not a training officer in the hazardous materials program. Therefore, it is a big challenge, to provide training to the people who have a need. We are making headway in it.

Mr. FUQUA. Mr. MacKay.

Mr. MACKAY. Mr. Chairman, I would like to ask the question and have both of the gentlemen comment on it from their perspective. It seems to me you are involved in the Superfund, and then there is the RCRA, which is the hazardous waste program.

We have had testimony this morning of three different situations—they are illegal disposal situations—but none of them would have come under your program at all, as I understand it.

In other words, a place where drums of material were stored and they leaked and contaminated the aquifer, that is not an emergency spill and it is not significant enough to be in Superfund, so I guess that is not something you would be involved with.

Mr. HYDE. Congressman, we may not be involved with it, but we get involved with it. When I became involved in this training program, I was told that I would work with the emergency response people, and so I started contacting the emergency response people. Come to find out, I was dealing with Superfund people.

When I got to the Superfund people, I found out that I was dealing with RCRA people.

So when we go into a State—and like this afternoon, we will have a meeting, and representatives from all those programs will be there.

We have training programs that apply to those people that are in the State programs.

Mr. MACKAY. That is the point I was trying to get at. So to the extent there is a distinction between those two programs, as far as you are concerned, in your efforts to train response people, you are not concerned with that distinction? You are trying to—

Mr. HYDE. No, sir. My concern is to take the appropriate training to the appropriate people in the State.

Mr. MACKAY. So, then, the idea of the prototype where State government was setting up a mechanism to help train local officials, as I understand your comment to that, you would welcome that, although the extent to which your funding would allow you to participate is not clear. Is that—

Mr. HYDE. Yes, sir. That is true.

Mr. MACKAY. OK. Now, in the identification program, or the inventory, I guess you would perceive that as a necessary first step; would you not?

Mr. HYDE. Yes, sir. But I am not involved in that.

Mr. MACKAY. In other words, it has got to be a disaster before you get involved?

Mr. HYDE. No, sir, not me, because I am in the training end of it. I am hopeful that I am going to see the people that I work with before this happens.

Mr. SMITH. Let me try to clarify.

Mr. MACKAY. It seems to me there is some dysfunction in the way these programs tie together, not that they are bad guys or good guys, but simply because one of them passes one ear and one passes another, they don't always get coordinated.

Mr. SMITH. Let me help that by saying this, that both parts of the hazardous waste regulatory family—you have got to consider this. Superfund addresses the uncontrolled hazardous waste site, one within which there is no hierarchy of ownership or identifiable generators to work directly with.

Or there may be that spectrum of people, but they can't afford or will not participate in an effective cleanup.

So Superfund is not far divorced from RCRA. RCRA deals basically with siting and developing the programs within which the State can regulate the location of the material.

Generally, they are working with viable, solvent, functional companies. The training effort and the interface that the local government would have not only with training, but the waste management program, would have to embrace both of these.

The local government, for instance, in a contingency planning effort, which would deal specifically with, or largely with prevention, would want to develop data bases that address every kind of a site, whether it had an ownership profile or not.

Mr. MACKAY. I am very much in agreement with what you said about the Lexington plan. Something like that is what has got to

happen if we are ever going to deal with it, and local government has got to run it.

What concerns me is that when local government starts dealing with small business and runs into a storm of resistance because of the paperwork involved. Has EPA given any thought to developing, in effect, a simplified procedure for small generators?

In other words, at this point, if the threshold were reduced from where it is now or if local government went in and tried to develop its own procedure using your forms, the feedback I have gotten is the resistance is going to come from the small businessman that says, "This form is obviously developed for DuPont," you know, "and here I am generating 3 gallons a month and this is an unnecessary burden."

Where in EPA would that be considered, that whole question of a simplified compliance procedure?

Mr. SMITH. Basically, you are addressing an issue right now of RCRA and the permitting. I can't answer that, sir.

I am sorry. I didn't know that would be a specific question, or I would have tried to gather that.

Mr. MACKAY. I didn't either, to tell you the truth.

Mr. SMITH. Right. But in terms of the uncontrolled waste site, I think the paperwork can be greatly simplified; and the Federal Government basically would use Superfund to back up the needs of the local people. It is not one that would usurp their authorities.

The problem that the local governments have, really the big problem has always been it is very difficult to find out who is absolutely responsible for that issue when you get there. It is not always real clear.

Now, I have heard testimony here today from Government perhaps where it is pretty clear. But there are a thousand counties in my region, and they vary substantially.

Mr. MACKAY. I don't think it is altogether clear in Florida. I recall the testimony we had a couple of years ago about who would be in charge in the event of a spill on the highway; and I, frankly—we got all agencies together; there were at least five State agencies—and I couldn't understand who was to do what. I don't think they are in agreement.

Mr. SMITH. Whenever they ask you that question, I always recommend the answer is, of what? People are always asking me who is in charge.

As long as there are three levels of governments, you know, specific statutes, primacy is a very difficult thing to take with you on a Sunday out to a spill.

So as long as we have local governments and State governments, they have got to be in charge of something, or else we had all better learn how to drive firetrucks.

Mr. HYDE. I might add this comes up quite often in our training courses, and a lot of times it is not resolved as to who is in charge.

Mr. MACKAY. Well, would you support an effort to clarify the statute and then the regulations to make it clear that local government is the primary point and that we are in a supportive role, State and Federal?

Mr. SMITH. Let me address that. The principal operative in this area would be the national contingency plan, which is pretty specific in identifying functionary roles.

I would like to just say that for years we have talked about something called a Federal onscene coordinator and have given him or her certain duties that are pretty rational to understand.

I have been promoting the thesis for years and written textbooks along this line. There should be a local onscene coordinator, and they should be empowered by law to do certain things, and there should be a State onscene coordinator.

These people are not onscene coordinators. They are not necessarily there to compel, but they are there to coordinate.

There is no reason that three levels of government can't function at any kind of a site cleanup or even an emergency because they, you know, have just got to coordinate.

If you try to identify, for instance, the local onscene coordinators being totally in charge, he or she gets in trouble when you get out in the 21-day cleanup.

The fire chief is no longer interested in cleaning up soil residuals, and the Federal official is not going to be there in the early hours of this thing.

So the three levels of government have to work together. They are going to work together whether they want them to or not. Motherhood is just going to dictate that to us.

Mr. MacKAY. Thank you.

Mr. FUQUA. Thank you, Mr. MacKay. Mr. Lewis.

Mr. LEWIS. Thank you, Mr. Chairman. Mr. Smith, could you give me a definition of emergency that could cause Superfund to kick in?

Mr. SMITH. Yes, sir. There was a whole lot of procrastination at the Federal level of what an emergency was. We started coming up with acronyms defining such things as cleaning emergencies, planned removals.

An emergency, to me, is something where a chemical product, for instance, or a combination thereof, is simply out of its designed system. It is out of its container and it can't be controlled by the people that are carrying it, whether it be a railroad event or burning pesticide warehouse or a truck accident.

It is there to confront the public in a situation that they are not particularly ready for. We might have 12 minutes' warning on a missile coming from Cuba, but of a train wreck in downtown Molina, we don't have any warning.

So that is the emergency that is addressed by Superfund, and the big participation in the emergency from the Superfund angle is the idea industry won't clean it up, the Superfund will.

Now, industry rolls, or their track records has been substantially good in terms of responding to these. I have got to tell you that, quite frankly, they have better than a 99-percent response to the cleanup of accidents, but there are occasions where there are parts of that accident they may not be funded because of legal liabilities, third-party involvement.

Superfund is always there to try to kick in the money any hour of the day or the night to protect the public, and that is the pretty

part of Superfund in the emergency area, is its availability for usage, not the fact that it commandeers the local resources.

Mr. LEWIS. Would you consider it an emergency if there was a discovery of some trace elements from several years ago that were now contaminating wells, say, in Tallahassee and immediate action had to be taken to clean up the elements as best you could clean them up?

Would that be considered an emergency for Superfund to kick in?

Mr. SMITH. I would change the wording to a planned removal, which is a subcategory of emergency. Yes, sir. All that does is allow EPA to get into a contractual position which better honors the Federal Government.

For instance, it is a 14- or a 20- to a 30-day response to that kind of emergency.

Mr. LEWIS. Does that get into permitting and bidding and who is going to clean it up?

Mr. SMITH. No, sir, there is short circuits to a lot of that, to the permitting. No, sir, that short circuits much of that.

That is something short of the remedial cleanup that you hear so much about that takes quite a bit of time and a lot of paperwork documenting what happened.

The planned removal is a—now, there is some thought, I understand, in Washington being given to even trying to reduce that to a shorter form of response, because public health and public welfare has got to fall on the emergency end of the spectrum.

You cited in your scenario a very positive danger. I even heard one here today. But, you know, unless we hear about these events, we don't know about them.

Mr. LEWIS. For example, you heard Mr. Windham's testimony.

Mr. SMITH. I did. Right.

Mr. LEWIS. Would that be considered a planned removal or would that be considered an emergency?

Mr. SMITH. There is a response within Superfund to his dilemma; and that is, had I known about it, or anybody on my staff, we would have sent one of our site people down to investigate his situation to make a determination of whether or not it would qualify for any kind of Superfund activity.

Mr. LEWIS. Now that you know about it, what can you do about it?

Mr. SMITH. The same thing.

Mr. LEWIS. Are you going to do something about it now?

Mr. SMITH. I will go back to my site people. I will have to get data from him as to where he is. But this is the first knowledge I have of it, when I heard of it this morning.

Mr. LEWIS. That is sort of strange. It has had tremendous publicity.

Mr. SMITH. Well, I have 8 States and a very small staff. It takes pretty much direct exposure. Superfund does have a reporting requirement. But any time that hazardous chemicals—and there is a laundry list of them—have the potential effect or do affect persons or property, Superfund can be invoked.

Mr. LEWIS. Thank you, Mr. Smith. Thank you, Mr. Chairman.

Mr. FUQUA. Thank you very much, Mr. Hyde and Mr. Smith.

Mr. HYDE. May I speak to a statement that the Senator made this morning about a statewide public awareness program?

In the past, under the Title V of the Old American Act, senior citizens have done jobs like this. In the State of Florida, there was a pesticide survey done in a contract between EPA and the State of Florida and the American Association of Retired People. And at the present time they are getting ready to do a nursery survey. And with the number of senior citizens that are in the State of Florida, there is a good possibility that a program like this could be worked out.

I will mention it this afternoon when we are over at the State.

Mr. FUQUA. That is very good. We thank you very much, Mr. Hyde and Mr. Smith, and we look forward to cooperating with you. We will have Mr. Windham get in touch with you.

Mr. SMITH. Thank you, sir.

Mr. FUQUA. Our next panel will be former Representative George Sheldon, who is the president of the League of Conservation Voters; Mrs. Marjorie Carr, president of the Florida Defenders of the Environment; Ms. Suzie Ruhl—did I pronounce that correctly?

Ms. RUHL. No, Ruhl [pronouncing].

Mr. FUQUA. Ruhl, right; pardon—Legal Environmental Assistance Foundation.

We are happy to welcome all three of you. George, we will be pleased to hear from you first.

STATEMENTS OF GEORGE SHELDON, PRESIDENT, LEAGUE OF CONSERVATION VOTERS; MARJORIE CARR, PRESIDENT, FLORIDA DEFENDERS OF THE ENVIRONMENT; SUZIE RUHL, LEGAL ENVIRONMENTAL ASSISTANCE FOUNDATION

Mr. SHELDON. Thank you. Mr. Chairman and members of the committee, let me indicate that I would like to submit at a later date written comments.

Mr. FUQUA. Without objection, we will make that a part of the record.

Mr. SHELDON. Thank you. You know, I chaired the House Committee on Governmental Operations for the period of the last 2 years in Florida and, frankly, was very surprised after appointing a select subcommittee on the issue of hazardous waste just where we are in Florida.

We have always looked, for instance, at Florida as the growth State in the Union, people moving here, a substantial amount of light industry, a substantial amount of positive economic growth.

But along with that, we are now finding that the EPA has identified 25 sites in Florida that are available for Superfund dollars. We have got some 200 identified uncontrolled sites in addition to that. So all of that progress has brought a problem; i.e., how do we deal with the whole issue of disposal of hazardous chemicals.

Frankly, in looking at that for a period of 1 year, I came to the conclusion, and I think the members of that committee came to the conclusion, that this State's response and the Federal Government's response in the whole area of hazardous waste has been an abomination.

We have reacted to a problem after it developed as opposed to trying to put together any kind of cooperative venture between the various elements of Government and industry.

Industry has a very serious problem, and that is, how do they deal with the legitimate generation of their waste products?' How do they do it in a responsible fashion?

Local government has a serious problem in terms of how do we deal with identification of generators? How do we deal with the location of sites? How do we deal with a prevention of this separate and apart from the whole issue of cleanup?

We have a tendency in government of seeing a problem and then defining a regulatory scheme to deal with that problem as opposed to saying where we are going to be 10 years from now.

I think that is what happened in the area of hazardous waste. We never told local governments. Local governments were, frankly, never aware. I think that both former Senator Lewis and Senator MacKay remember in Florida when we proceeded toward deinstitutionalization of the mentally retarded.

We, frankly, never told local government that was going to happen, and all of a sudden they were going to be confronted with requests for zoning for group homes. The same thing is true with regard to hazardous waste.

I think the most critical thing that has to occur, both with the State and Federal level, is to realize that local government has a role to play. And I think it is really academic whether we say that is a primary role or secondary role. It is a role in terms of assessing what the problem is.

The average dry cleaner operator out there is an individual who wants a clean environment. He wants to be able to deal with his waste; and, frankly, up until now he hasn't even known he has had the wastes.

So I think that if we can develop both in this State and at the Federal level a mechanism to fund and authorize local assessment programs, to identify small generators and to come up with a system for management, then I think we have made an appropriate first step toward dealing with the issue of hazardous waste.

But I think in addition to that we have to realize that there is a role for the Federal Government, a role for the State government and a role for the local government. The whole issue of siting is a very, very difficult bridge to cross. It is difficult because everybody wants to deal with the issue of crime, but they don't want a prison. Everybody wants to deal with the issue of hazardous waste, but they don't want the location of a site.

The primary responsibility should be local governments' in terms of making those decisions. But I think that we all realize that the carrot and stick approach has been very successful in the past, offering the carrot in terms of allowing the local governments to develop an assessment of what the need is, who the generators are and how to deal with it; but also having that stick out there in terms of State government saying that if local governments fail to respond, then on the issue of siting we are prepared to come in and make that decision, in a cooperative fashion with local government.

If we are able to put together a program which identifies the roles of the three levels of government, extends a hand to industry

in terms of saying it is not government's responsibility solely but it is a mutual responsibility between your industry and local, State and Federal Government, then I think we will have come a long way in dealing with the issue of hazardous waste.

From the standpoint of the League of Conservation Voters, I don't think that there is a greater volatile issue from an election standpoint than the issue of hazardous waste because the average citizen out there in Lloyd, Fla, or the average citizen out there in Thonotosassa, dealing with the Taylor Road, which was, frankly, a failure on the part of county government, the average citizen out there is demanding action on the part of his local officials, the State officials and his Federal officials.

And I think that public right to know exists, but also the public is now being cognizant of what the responsibilities are.

Gentlemen, you have a tremendous role in trying to come up with that program, and I congratulate you on your foresight in trying to put this kind of hearing together.

Mr. FUQUA. Thank you very much, George.

And we are very happy to have you, Ms. Carr. In fact, if I could just borrow the phrase of the organization, you are the defender of the environment.

Ms. CARR. Well, you are very kind. It is very positive to be here.

I have been tremendously impressed with all of the testimony that I have heard this morning. It seems so constructive, excellent ideas. Again, I am proud of Florida as being a leader in this field.

I am not going to go over all the points that would have been in my testimony, and I will submit a written testimony later.

Mr. FUQUA. We will make it part of the record.

Ms. CARR. Yes. Thank you. But I would like to underline or accentuate a few points. I trust I am speaking not only of myself, but for conservationists in Florida here.

The idea of involving local government cannot be overemphasized. They can be the most effective; they can be the most efficient and, indeed, it is their obligation.

In order for your local government to be effective, you move to the next thing of education, public education; not only education of your public, of your public at the county level and town level—and by town, I am thinking of Micanopy, a little town—but the officers of that little town have a responsibility. They want to know how best to operate. They need the education.

And I think a good educational program is going to be very difficult because hazardous wastes have long names, they behave in different ways under different circumstances. To have an educational program on how to handle hazardous waste is going to be much more difficult than, say, an education program on how to save the Florida panther.

So you have a problem here. But, of course, it can be solved with diligence and a good deal of effort.

The other thing that I would like to emphasize that I think the—naturally enough, the thrust of the efforts so far has been to clean up the messes that we have made in the past. Apparently we have a good grip on that.

But I think the most important thing, which has been mentioned over and over this morning, is that highest priority should be given

that we don't make messes in the future. And I mean starting right now, because that is very expensive. You know, that is a terrible waste of money.

And I think that in that area, it seems logical to put a great deal of emphasis on reducing the amount of hazardous waste at the source; and that will take—that is a very fertile field for innovative planning.

You know, I am thinking of fertilizer. Fertilizer doesn't become a hazardous waste unless you have it run off into something. So it will take the proper use of material so that you use it properly where it is a good thing, but doesn't run off into the local creek and become a hazardous waste. There is that.

So to use a product efficiently, not overuse it, is very important. And I think, again, that ties right back into the public education.

You see a housewife buying something, you are looking on the label, right on the label there will be the need to have some education about that potential hazardous waste of the material in the bottle or in the bag.

I think, here again, is the question of incentives must be used. And they are already being used, I understand, and have been somewhat successful in the reuse and recycling of a great many of our hazardous wastes. And I think that ought to be increased and accentuated more in the future.

As I said, there have been many good things said this morning which I would certainly say amen to over and over again. There is just one last thing that I would like to mention.

Here in Florida, because of the location of our State, a peninsula pointed right down toward Latin America, a peninsula that is surrounded by the Atlantic Ocean and the Gulf of Mexico, we here in Florida are conscious of our Latin American neighbors, perhaps more than others; and we are also conscious of our marine resources.

It is incumbent on the Federal Government as well as the State government to be very much aware that until we have perfected our plans, our control of hazardous waste, that we are going to find outlaws taking them, for a fee, out to sea and either dumping them in the sea or, as I have heard, taking them down to some of the Latin American countries and some of the islands in the Caribbean for dumping.

Why, I can't imagine. That seems a very strange thing to do, but I understand that they are doing it. And for a price, these outlaws will move right into this field.

So I think that we need to be very careful that the hazardous wastes of the United States do not wind up on the doorsteps of our Latin neighbors. And this, I think, is terribly important.

I think we need to monitor this also and be vigilant in seeing that they don't get dumped where they will enter the ocean, where they will poison either the coastal areas or the areas farther out where there are fish, what not. Thank you very much.

Mr. FUQUA. Thank you very much, Mrs. Carr.

Mrs. Ruhl, we are very happy to have you here.

Ms. RUHL. Thank you. I appreciate your interest in this vital public health issue. It is important that we develop a consideration of both long- and short-term consequences.

Today the efforts at managing hazardous wastes have been somewhat patchwork in an attempt to maintain the status quo; and I think the status quo is probably falling in our efforts.

I am an environmental lawyer and environmental epidemiologist, and I work with a public service law firm that has dealt with a number of hazardous waste issues more or less on a continuum of time.

We have been involved with past problems working with citizens in Alabama, Tennessee, and North Carolina in trying to initiate progress to clean up past uncontrolled sites.

In Alabama we have been working with citizens trying to monitor current disposal facilities, and at the same time regarding future efforts, we are trying to promote the alternative technologies which are and do provide the soundest and the safest technologies for control.

What I would like to do now is summarize the findings and the conclusions that we have reached in working in this area for the last 3 years in the South, and hopefully these conclusions can perhaps provide some direction in which the efforts should take.

The first issue that I would like to discuss is the appropriate role of the different factions involved in the hazardous waste issue. A lot has been discussed so far about the various roles of the government levels, the Federal, State, and local governments. From our experience, we feel that the Federal Government should take the lead in establishing minimum environmental protection standards, and they should facilitate the safest methods of disposal. They can do this by increasing research into the available technologies and also by providing legal and economic incentives for the alternatives.

Regarding the State's role, we feel that they have sufficient recognition of the problems within a State; and; of the waste streams that are being generated in the State, of the managing capacities that exist. We feel that they are at an appropriate level to decide specific issues of various hazardous waste problems.

However, they must have the resources to adequately deal with the issue, and our experience in a number of States has been that they have not. They have been forced to assume a number of responsibilities with completely inadequate resources to deal with the problems.

The local government can also play a very important role in the hazardous waste dilemma, as has been mentioned previously, in the identification of the waste, and in understanding the needs of the generators, both large and small.

Moving on to another important faction that has probably not been completely characterized, is that of the industry. All too often industry is lumped into one similar group; but in reality, they consist of the generating industry, the disposing industry and the transportation industry. All too often, the regulations and the attention focused on them by the media have clumped them together.

Our experience has been that the disposing industry has received the brunt of the negative publicity regarding hazardous waste, when in reality they are generally trying to do something about it. That the generating industries have taken a back seat and have not gotten involved.

We feel that the generating industries have, and can play, an important role in familiarizing the subject of hazardous waste to the people.

An example that we faced in the South occurred last year when we tried to put on a series of hazardous waste conferences designed to educate citizens on the hazardous waste issue; I had the U.S. EPA Environmental Activities Handbook, which listed the generators of hazardous waste in that area. I contacted over 10 generators in an area to get them to come to the seminar to discuss their role in the hazardous waste issue, to try to familiarize the fact that this company was providing the pay check for a number of citizens and that, therefore, the citizens had a responsibility in the process.

All 10 denied any involvement in hazardous waste, even though I knew that they had it. So that was an unfortunate situation.

Moving on to the last faction that has in fact thwarted a great deal of the attempts to properly manage hazardous waste is that of the public. Unfortunately, the public is also lumped into one group and the different motivations and means and objectives of the public are not adequately assessed; As a whole, it appears that the public is kept in the dark regarding specific facts.

Our organization was involved with the U.S. EPA Waste Alert Program, which did a great job educating the public on the problems posed by hazardous wastes. Unfortunately, the program was stopped with the current administration, and therefore efforts to educate the public about the availability of safe technology has not taken place. And I think that has been a tremendous detriment to the whole waste management process.

The second issue that I would like to mention briefly is that of the siting issue, and this involves both retrospective and prospective concerns. A lot has been mentioned today about the problem of cleaning up of uncontrolled sites; and once again, the public is suffering from a lack of information and knowledge.

Because they don't have access to accurate, relevant information, they are forced to rely on the media and other sources of information that aren't necessarily accurate. The citizens need to be aware of the tools that are available to them to properly deal with the cleanup of hazardous waste sites.

Our organization also believes that the establishment of a priority protocol to deal with new, uncontrolled sites will probably enhance the credibility of any remedial effort. Unfortunately, agencies are overwhelmed with the new information regarding many new sites and right now the funds do not exist adequately to deal with all of those problems.

The second issue within the siting problem deals with prospective concerns and the one issue that our organization feels the most strongly about, and that relates to the alternative disposal mechanisms that are available.

EPA has recognized that landfills will probably eventually leak in spite of the increasing technology that does exist; and unfortunately, because of the costs of current disposal technology, landfilling is predominantly used.

We feel that the alternative technologies, which include waste reduction, recycling, resource recovery, various forms of treatment, incineration and solidification and stabilization of residuals, should

be used. They are used in Europe where they don't have the tremendous amounts of land that we have in the United States. Japan is leading the way on these alternatives. But in the United States, the focus is on landfilling.

There are a number of things that the Government can do to try to encourage the alternatives, and these include things ranging from scheduling a prospective ban on landfilling of certain high priority wastes; imposing a fee discrimination system; providing the financial incentives, either through tax breaks or through various other mechanisms; and it could also include streamlining the permitting process for the alternative technologies.

Regarding another issue which has been brought up today is the exemptions from regulatory action. We feel that this is both a quantitative and a qualitative issue. It is a good idea to include as many generators of hazardous waste in a regulatory scheme as possible, but to simply reduce the small quantity exemption from 1,000 kilograms, as it is today, to either 100 or zero, which is proposed, will not do a great amount of good unless the resources are provided to deal with those generators.

It appears that the State and local governments today, at this point, without increased resources, are not capable of dealing with the additional workload; and this can thwart the prioritization process.

Finally, regarding the health implications of exposure to hazardous waste in the dump sites, we feel that a lot more research needs to be done because of various problems with latency, of multimedia exposure, and with the problem of identification of the actual contaminant.

An adequate understanding of the actual implications is not there, and research is needed to supplement what is in existence. The different scientific disciplines should be integrated with their positive points maximized, and these include epidemiology, toxicology, and clinical studies.

We support the concept of the Agency for Toxic Substances and Disease Registry, which was required in the Superfund Act, but which has not yet been implemented. And we would hope you would encourage the public health service and the EPA to move with that agency.

Finally, in conclusion, I would like to say that a fundamental understanding of all of the intricate issues involved with hazardous wastes, from past, present, and future perspectives, must be attained; and I think that this panel is the first step in the right direction. Thank you.

[The prepared statement of Ms. Ruhl follows:]

PREPARED STATEMENT OF B. SUZI RUHL, J.D., M.P.H., EXECUTIVE DIRECTOR AND
GENERAL COUNSEL, LEGAL ENVIRONMENTAL ASSISTANCE FOUNDATION

Mr. Chairman, distinguished members of this Subcommittee, I would like to begin by thanking you for the opportunity to discuss the implications of the hazardous waste dilemma. Your interest in this vital public health issue is critical to the maintenance of a hazardous waste program which can serve to promote the economic vitality of our country while at the same time protect the welfare and safety of the people and our environment.

As a lawyer and an epidemiologist, I serve as the Executive Director and General Counsel of the Legal Environmental Assistance Foundation. While specializing in the field of environmental law and environmental epidemiology, I am investigating the legal and health implications of human exposure to environmental agents. A more detailed personal resume is attached as Appendix A.

By way of background, the Legal Environmental Assistance Foundation (LEAF) is a public service law firm which provides legal, health, and technical information and assistance to citizens, organizations, and small businesses in the South. LEAF has been involved in the effort to resolve the hazardous waste dilemma for over three years on national, state, and local levels. As part of the U.S. Environmental Protection Agency's Waste Alert Program, LEAF has conducted state and local conferences on the legal, health, and technical ramifications of hazardous waste production and management; developed literature targeting rural, poor, and uneducated citizens who are directly affected by hazardous waste, and; established dialog groups with representatives from the public and private

sectors to address environmental issues in a non-adversarial manner. LEAF is currently conducting a program to provide assistance to citizen groups to initiate toxic waste site clean-up; drafting state legislation to provide legal and economic incentives for the use of alternative waste management technologies, and; providing legal assistance to small generators on liability issues.

Through this involvement in the hazardous waste issue, we have developed an understanding of the motivating forces behind actions of the public and private sectors and the changes which should be made to maintain the quality of the natural, social, and economic environment. Today, I will present our findings and conclusions for the purpose of providing direction to the efforts which should be made by the government sector to resolve this national dilemma. The issues to be addressed include the roles of the various factions involved in the problem, characteristics of the siting controversy, ramifications of regulatory exemptions, and human health implications from exposure to hazardous waste.

To determine the appropriate role of each faction in the hazardous waste dilemma, the concerns, needs, and objectives of each party must be comprehensively identified. The factions include the government- federal, state, and local; industry- generators, transporters, and disposers, and; public- landowners, environmentalists, and businessmen. The function is also dependent on the task to be performed, which can include the siting of facilities, the identification of the wastes produced in an area; an assessment of the management capacity in the area, and; the implementation of controls and incentives for proper management.

In light of both constitutional and practical constraints placed on the federal government, our experience suggests that the role of the federal government be directed to the establishment of general standards of environmental protection, research and development of management technologies, and facilitation of the safest methods of disposal. The federal government should not, however, be involved in decisions of site location or selection.

As overseers of the health and economic needs of the state, state governments are in a good position to decide the specific issues of hazardous waste management. They are in a position to inventory the needs of industry, decide on management capacities required, and educate the public on the ramifications of decisions. However, state governments must have adequate resources to accomplish their objectives, and will be completely ineffective in promoting proper management of hazardous waste if they are underfunded.

Local governments can play a very important role in the resolution of this problem. While their concerns and power are too focused to decide on the siting issue, they can supplement state governments with information and act as vehicles of information. They can assist in the assessment of the type, amount, and source of hazardous waste generated in a given area, and recommend management capacities.

It is important to understand the role of industry both in creating and resolving the hazardous waste dilemma. Initially, each industry must be adequately characterized as a generator (large or small), a transporter (truck, rail, vessel), or as a disposer (landfill, incineration, treatment, alternative). Second, the needs, objectives, and problems associated with each type of industry must be adequately and appropriately dealt with. All

too often, these differences are not recognized in the media or in the regulations. Third, each type of industry should be attributed its true role in the dilemma. The disposing industry has received the entire blame for the hazardous waste problem, when in reality it is purporting to resolve management issues. The generating industry traditionally denies to the public any involvement in the dilemma. Fourth, changes in operations of industry types must be recognized and reflected in the regulatory process.

Pressure in determining how hazardous waste can and are managed comes from the public. To date, most of the citizen activities are in the form of opposition to the siting of facilities. The opposition is rooted in fears of major and long term risks, and reflects a loss of faith in the ability of government and industry to solve environmental problems while considering local interests. This attitude results from the fact that the public has been made aware of the problems of hazardous waste, but has not been adequately educated on the availability of sound, safe hazardous waste management technologies. As a result, citizens have a blind fear of all toxic substances, and little understanding of the concept of "degrees of hazard". The public must be informed that exposure to hazardous waste is serious, but manageable. Public education is desperately needed to provide the facts, so that affected people can make informed judgements about proposed facilities and management capacities.

To summarize, the roles of each faction must be clarified and understood. Each faction can and should not operate independently, but must communicate objectives and needs in an effort to promote cooperative problem solving.

The siting issue entails both retrospective and prospective concerns: the clean-up of past mismanaged operations and the location of new facilities to deal with present and future waste production.

Provisions in several federal environmental statutes address the issue of clean-up of hazardous waste. Unfortunately, relief provided to citizens remains inadequate from both a procedural and substantive perspective. Citizens do not have access to accurate, relevant information, and are forced to rely on the media for guidance. Citizens should be notified of potential health problems, have access to information, and receive notice and opportunity to comment on major health studies and proposed actions at sites. The objective of remedial efforts should be to achieve the best understanding of a situation rather than to diffuse concern or manipulate efforts of citizens. The establishment of an a priori protocol to deal with alleged hazardous waste sites by government health agencies would serve to document objectivity and promote credibility.

In addition, the resources created by Superfund can only begin to initiate clean-up of uncontrolled sites. More funds must be generated, responsible parties must be identified, and clean-up costs must be reduced through advanced technologies. Federal guidance is most certainly needed in this area.

Despite major safeguards added to land disposal practices, the long term security of even the most modern and sophisticated landfill is questionable. And, even though some landfilling will always be necessary and can be done in an environmentally sound manner, other technologies are available to more safely manage hazardous waste. Due to the disparity in costs between landfilling and the alternative technologies, and the

inadequate awareness of their availability, the alternative technologies are not used to their maximum potential. The technological, legal, and health advantages of alternative waste management approaches must receive attention commensurate with their ability to provide relief. The following hierarchy is suggested as the optimal management strategy for hazardous waste: waste reduction; waste recycling and resource recovery; physical, chemical, and biological treatment; high-temperature incineration, and; solidification and stabilization of residuals before landfill.

The use of alternative waste management systems will reduce the long-term liability associated with landfills and help both industry and government avoid major clean-up costs in the future. Alternative technologies can be used by generators and waste management firms to recover valuable constituents, conserve energy, reduce environmental risks, and avoid short and long term liability.

The federal and state governments' role in redirecting hazardous waste away from land disposal can include the following functions:

- *schedule prospective ban on high-priority wastes from land disposal
- *impose a special fee on the land disposal of high-priority wastes
- *create financial incentives for industries to reduce, recycle, treat and destroy their wastes
- *streamline the permit process to help encourage the construction of new alternative waste management facilities
- *develop a categorization scheme to link waste types with preferred methods of disposal.
- *support research and development of alternative waste technologies.

Ultimately, the problem of public opposition to hazardous waste facility siting must be resolved to avoid the collapse of the national regulation effort. Public education and participation, as well as the promotion of safer, sounder technologies, are essential ingredients to the resolution of the current siting impasse.

The issue of exemption from regulation is both a quantitative and qualitative one. Tremendous environmental and public health problems are caused by unregulated generators disposing of wastes in sanitary landfills. However, to simply reduce the small quantity generator exemption without increasing the resources of the appropriate regulatory agency will only serve to diffuse the efforts from priority issues. Attention should be focused on the development of control capacities within such entities as local governments. Also, the argument should at least be considered that materials destined for recovery, recycling, and reuse are, by definition, not waste and should thus be exempt from hazardous waste regulation.

Finally, the issue of the health implications of exposure to hazardous waste should receive increased attention by the federal government. The creation of the Agency for Toxic Substances and Disease Registry, as mandated by the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, would most certainly provide critical data and information. Comments on this subject are attached as Appendix B.

Personal research has resulted in the conclusion that epidemiology has not been utilized in the regulatory process for environmental agents at its maximum potential. General uses of epidemiology which should be considered include:

*diagnose a problem, i.e. to identify the population at risk, assess the impact of alternative routes of exposure, delineate the scope of the health problem and elucidate such exposure factors as the effect of multimedia exposure and the identification of the source;

*assess the confounding and associating variables, such as smoking, age, sex, socioeconomic status and seasonal variation, which influence the health impact of an exposure situation;

*check validity of alternative measurement of disease processes; this addresses the problems posed by the non-specificity of clinical endpoints, the dearth of useful tests for pre-clinical stages of disease, and the latency period between exposure and effect;

*evaluate the effectiveness of environmental health regulations.

The recognized limitations of epidemiology can be compensated by the integration of epidemiology with other disciplines and improvements made in epidemiologic data gathering processes. As clinical studies are better able to identify the continuum of health effects resulting from exposure to environmental agents in the individual, epidemiology can better assess the health consequences on the total population. As animal studies are able to identify substances that are potentially toxic to man, epidemiology can validate them. As monitoring techniques and occurrence data provide more explicit information on the intensity and length of time of exposure, epidemiologic measures of impact can be better assessed.

Ultimately, by promoting the full potential of epidemiology, as well as other disciplines, through adequate research funding, the dilemma posed by hazardous waste can be more adequately addressed by those responsible for the protection of the public health and environment.

Appendix A

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Education:

University of Florida Gainesville, Florida	A. A. - 1974 (Science and Math) B. A. - 1976 (English), Cum Laude
Cumberland School of Law Samford University Birmingham, Alabama	J. D. - 1979 (Juris Doctorate)
University of Alabama in Birmingham The Medical Center Birmingham, Alabama	M. P. H. - 1982 (Epidemiology), Cum Laude

Employment:

1982 - Present	University of Alabama, School of Law, Adjunct Professor of Environmental Law
1979 - Present	Legal Environmental Assistance Foundation, Executive Director and General Counsel
1979 - 1980	Human Services Education, University of Alabama in Birmingham, Project Manager for Study on Teaching Strategies and Learning Styles
1978 - 1979	Massachusetts Institute of Technology, Research Assistant for Study on Recycling of Building Materials
1977 - 1978	U. S. Attorney's Office (Environ- mental Section), Law Clerk
1977 - 1978	Cumberland Law School, Library Research Clerk

Membership in Professional and Scholarly Organizations:

American Bar Association
 Florida Bar Association
 American Public Health Association
 Environmental Law Institute, Associate

Honors and Other Special Positions:

American Trial Lawyers Association, Environmental Law Essay Contest, 1978, First Place for Region, Topic: Industry's Responsibility for Environmentally Caused Diseases

Law Students Civil Rights Research Council National Project Award, 1978, Topic: Nuclear Power and Civil Rights in the South

Lamar Society Award, 1979, Topic: Public Interest Law and the Environment

Omicron Delta Kappa

Outstanding Young Woman of America, 1979

Statewide (Alabama) 208 Policy Advisory Committee

Statewide (Alabama) Forestry - Water Quality Joint Committee

Women's Hospital of Alabama, Board of Advisors

Natural Resources Defense Council, Southeastern Review Committee for Toxic Industrial Discharges

American Lung Association of Alabama, Trek Committee

Birmingham (Alabama) City Council, Health and Environment Committee Task Force on Nuclear Waste Transportation

Alabama Conservancy: Vice-President; Chairperson of Legislation Committee; Chairperson of Energy Committee

Environmental Law Society, President 1977 - 1979

Outstanding Middle Distance Runner, 1974, University of Florida Women's Track

Outstanding Long Distance Runner, 1975, University of Florida Women's Track

Honors and Other Special Positions (Continued):

Facilitative Para-Professional for the Office of Student Affairs, University of Florida

Alabama Coalition for Clean Air Co-founder

Safe Energy Alliance Co-founder

Birmingham Regained Historical Society Co-founder

Continuing Education:(Grants Awarded for Attendance)

American Law Institute - American Bar Association
Environmental Law, 1978, 1979, 1981
Environmental Litigation, 1980
Atomic Energy Licensure and Regulation, 1979

Alabama Bar Institute for Continuing Legal Education
Energy and Environmental Law, 1979

U. S. Environmental Protection Agency Waste Alert Program,
Region IV, 1980

World Health Organization, United Nations Environmental Program,
International Atomic Energy Agency, Health Impacts of
Alternative Forms of Energy, 1981

International NATO/CCMS Hazardous Waste Symposium, 1981

Minerals Management Service, Department of Interior, Environmental
Conflict Management Workshop, 1982

Alabama Water Pollution Control Association, Alabama Division of
Solid and Hazardous Waste, Municipal Sludge Disposal Technologies,
1982

American Water Works Association, Workshop on Volatile Organic
Chemicals in Drinking Water, 1982

American Lung Association, Workshop on Organizing and Lobbying
for Public Health Issues, 1982

Publications:

Thesis: The Contribution of Epidemiology Studies to Environmental Health Regulations, University of Alabama in Birmingham, 1982

Ruhl, B. S., Reeder, J. R., Painter, W.: Toxic Wastewater in Alabama, A Citizens Handbook on the National Pollutant Discharge Elimination System, 1982

Ruhl, B. S. and Brill, I.: Questions to Ask Yourself About Hazardous Waste, A Layman's Understanding of the Problem, 1982

Description of Activities Related to Service:Testimony:

Alabama Legislature, Nuclear Energy Activities Committee, Remarks on the Proper Use of Scientific Information in Lawmaking, 1980

U. S. Environmental Protection Agency, Region IV Groundwater Committee, Remarks on the Impacts of Hazardous Waste on Groundwater Systems, 1981

Birmingham (Alabama) City Council, Remarks on the Legal Implications of Local Nuclear Waste Transportation Ordinances

Alabama Air Pollution Control Commission Public Hearing on Proposed Revision of Implementation Plan of Alabama, Remarks on "Volatile Organic Compounds and Nonreactive Organic Compounds," 1982

Legislation Drafting:

Alabama Legislature:

Tax Incentives for Using Alternative Hazardous Waste Management Technologies

Hazardous Waste Facility Siting

Birmingham (Alabama) City Council:

Regulating Nuclear Waste Transportation

Jacksonville (Florida) City Council:

Regulating Hazardous Waste Incineration Facilities

Conferences Coordinated:

- "Hazardous Waste Regulations: An Overview by Federal and State Government," Livingston, Alabama, 1981 (per U. S. EPA)
- "Hazardous Waste Management: Health, Legal, and Technical Implications," Eutaw, Alabama, 1982 (per U. S. EPA)
- "Siting Hazardous Waste Facilities: Compensation, Mitigation, and Incentives Techniques," Selma, Alabama, 1982 (per U. S. EPA)
- "Hazardous Waste Dialogs: Government, Industry and Public Communications," Knoxville, Tennessee 1982 (per U. S. EPA)
- "Toxic Wastewater Control in Alabama: Citizen Participation in the Industrial Permit Process," Birmingham, Alabama, 1982 (per Natural Resources Defense Council)
- "Water Quality and Land Use Planning," Birmingham, Alabama, 1979 (per Cumberland Law School)

Public Appearances:

- University of Georgia Law Week, Guest Speaker on "Public Interest Law and the Environment," 1982
- University of Alabama Law Week, Guest Speaker on the "Health and Legal Impacts of Hazardous Waste," 1981
- University of Alabama in Birmingham School of Optometry, Guest Lecturer on "Optometry's Role in Public Health Protection," 1980 - 1982
- University of Alabama Law School, Environmental Law Class, Guest Lecturer on the "Role of the Lawyer in Environmental Disputes," 1981
- U. S. Environmental Protection Agency, Waste Alert Wrap-Up, Washington, D. C., Presentation on "Siting of Hazardous Waste Facilities," 1981
- Tennessee Environmental Council, Conference on Chemicals in the Environment, Presentation on "Legal Remedies for Toxic Chemical Problems," 1981

Alabama Bar Association Annual Meeting, Guest Speaker on "Toxic Tort Litigation and the Use of Epidemiology," 1982

National Governors Association, Chemical Manufacturers Association, American Petroleum Institute, U. S. Environmental Protection Agency Joint Conference on Hazardous Waste Siting, Atlanta, Georgia, Presentation on "A Citizen's Role in Siting Hazardous Waste Facilities," 1981

Women's Hospital of Alabama Workshop Series, Guest Speaker on "Chronic Disease Epidemiology and Female Cancers," 1982

Southeastern Connections, 1982 World's Fair, Symposium on Energy and the Environment in the Eighties, Presentation on "Environmental and Public Health Law in the Southeast," 1982

Associated Industries of Alabama, Environmental Section, Guest Speaker on "Economic Incentives for the Use of Alternative Hazardous Waste Management Practices," 1982

Center for the Study of Responsive Law, Citizens Conference on Hazardous Waste, Washington, D. C., Presentation on the "Health Effects from Hazardous Waste," 1981

League of Women Voters of Alabama, Consultant and Guest Speaker on "Hazardous Waste in Alabama," 1981

League of Women Voters of Tuscaloosa (Alabama), Guest Speaker on "Clean Air Act Issues Affecting Alabama," 1981

Alabama Conservancy, Quad Cities, Alabama, Guest Speaker on "Nuclear Power in the South," 1978

Alabama Conservancy, Tuscaloosa, Alabama, Guest Speaker on "Environmental Issues Challenging Alabamians," 1982

Safe Energy Alliance of Central Alabama, Guest Speaker on "Nuclear Power in the South," 1978

Ensley High School, Guest Lecturer on "Hazardous Waste: The Nations Dilemma," 1980 - 1982

Sertoma Club, Hoover, Alabama, Guest Speaker on "Environmental and Public Health Problems in Alabama, 1982

Edgewood Presbyterian Church of Alabama, Guest Speaker on Alabama's Hazardous Waste Problem, 1982

United Methodist Church of Alabama, Guest Speaker on "Christianity and the Environment," 1982

WBRC Huntsville TV, Guest Speaker on "Nuclear Power in the South," 1981, 1982

WTVM Birmingham TV, Guest Speaker on "Air Pollution in the South," 1981, 1982

WERC Birmingham Radio, Guest Speaker on "Historic Preservation and Urban Revitalization," 1980

WYDE Birmingham Radio, Guest Speaker on "Historic Preservation and Urban Revitalization," 1980

WZZK Birmingham Radio, Guest Speaker on "Environmental and Public Health Issues Facing Alabama in the Eighties," 1981

WBHM Birmingham Radio, Guest Speaker on "Nuclear Waste Transportation," 1982

WSGN Birmingham Radio, Guest Speaker on "Environmental Dilemmas in Alabama," 1982

References Available on Request

Appendix B

March 10, 1983

MEMORANDUM

TO: ELLEN SILBERGELD, Ph.D.
ENVIRONMENTAL DEFENSE FUND

FROM: JEFF ROSEMAN, M.D., Ph.D, M.P.H.
SCHOOL OF PUBLIC HEALTH
UNIVERSITY OF ALABAMA IN BIRMINGHAM

SUZI RUHL, J.D., M.P.H.
LEGAL ENVIRONMENTAL ASSISTANCE FOUNDATION

RE: EDF v. DONNELLY, ET AL., No. 82-3514; Comments on EDF's
Preliminary Views of the Requirements of CERCLA
Section 104(i)

The Legal Environmental Assistance Foundation (LEAF) strongly endorses EDF's interpretation of CERCLA Section 104(i) as requiring the creation of the Agency for Toxic Substances and Disease Registry (ATSDR) within the Public Health Service. A concerted and comprehensive effort is essential for both an adequate assessment of the magnitude of the public health problem posed by exposure to toxic substances and the remedial action required to ameliorate this problem.

The proposed exposure and disease registries offer perhaps the most innovative and useful approach towards managing the dilemma of human exposure to toxic substances, and would serve to provide much needed data for evaluating claims and establishing priorities for remedial action. It should be recognized that continued funding is an essential issue, and, to be effective, can not be limited by the time constraints imposed by CERCLA funding sources. Many of the health impacts have latent periods of many years so unless follow-up was assured, no worthwhile information would accrue during the CERCLA funding period.

Several points can be made regarding the disease registry. First, to a certain extent, birth defects, cancer, and death registers currently exist. Consideration should be given to utilizing and building upon these resources rather than duplicating what already exists. Second, federal law passed in 1981 requires a uniform method of maintaining death certificates and a National Death Registry. Attention should be focused on adequate enforcement of current provisions. Third, in developing additional registers, attention should be focused on the total range of health impact, including biochemical abnormalities, subclinical health effects, and non-cancerous diseases. Indicator disease concepts should be explored. Finally, in order to identify problems at the earliest point possible, incidence data should be used rather than mortality data. Systems which should be reviewed and considered in the process of establishing disease registries include the SEER cancer incidence registry and the CDC Registry of Birth Defects.

Of prime importance should be clarification of the purpose of the disease registries. Are they to provide follow-up data for the exposure registries or are they to be examined to possibly locate currently unidentified exposures. If the latter is the case, then the registry should be nationwide in scope.

A difficulty with prospective studies through the exposure register relates to the effect of the mobility of society on follow-up. Methodologies to deal with this problem should be developed, and examples of current follow-up programs, such as the Ferman I.Q. Study and College Alumni Study, investigated. IRS information could also be utilized. Finally, occupational exposure registries or the registries established following Hiroshima and Nagasaki could serve as a model. Another difficulty is that proper denominators and control groups are essential. Improper choices can mask any health impact of a particular exposure situation.

The issues surrounding the development of an inventory of literature and research include: what data should be abstracted; how should studies be combined; should the coordinating center be contracted out to various agencies or universities, or should it be in one permanent place. Once again, existing literature data bases should be reviewed.

The list of restricted areas concept prompts consideration of several points. First, there is the need to establish a priori the qualifications for listing. This should be based on the materials present, their toxicity, concentration and distribution and the number of individuals at risk for exposure. Second, this list is important because communities have a "right to know" whether their health is affected. Third, in making an assessment of risk, all possible bases, including short-term testing, toxicologic studies, clinical studies, and epidemiologic studies, should be considered so that the benefits of each base can be maximized and limitations minimized.

Regarding emergency medical care and testing, existing prototypes should be reviewed and expanded. The classic example is provided by the emergency response following the atomic bombings at Nagasaki and Heroshima, Japan, and following Three-mile Island.

Several caveats should be recognized when considering any survey and screening program. Among other things, the sensitivity and specificity of a screening procedure should be reasonable, with minimal inconvenience, and; the range of health impacts, including psychological stress, should be considered. The national screening programs for lead can serve as a model.

Overall, several points can be made regarding the implementation of these programs. Since literature inventory lists currently exist, one like the one proposed can be implemented relatively inexpensively. The Emergency care response should be a natural consequence of any disaster, and prompt response from a variety of sources. The registers would require the greatest expenditure of effort and resources to establish, but would offer the greatest amount of additional data essential for the understanding of the health impact resulting from exposure to toxic substnaces. It must be recognized that registries would be very costly in terms of personnel and computer facilities, that their success is dependent on lifetime follow-up, and that the issue of confidentiality is likely to arise.

Mr. FUQUA. Thank you very much. I don't have any questions, but I do want to thank you all. I think you contributed a great deal to what we are attempting to do, and your discussions are very thoughtful and things that we should take into consideration.

In order to accommodate Eastern Airlines, I have to go back to Washington; but I am going to turn the meeting over to Congressman MacKay to conclude.

The next group—or the chairman of Leon County Commission, I see Lee Vause back there and Carol Bellamy, the mayor of Tallahassee. And I think I see Gayle Nelson sitting in back. I can hardly see. I see her now.

But I think you will be very kind to them, Buddy; and I apologize for having to leave, but I am sure you have some questions of these witnesses.

Mr. MACKAY. Mr. Lewis, do you have any questions?

Mr. LEWIS. Thank you, Mr. Chairman. Mr. Chairman, have a safe trip.

Mr. FUQUA. Thank you.

Mr. LEWIS. Ms. Ruhl, how do you feel the generator should be controlled?

Ms. RUHL. I think that the first step is identifying the generators of hazardous waste; and I think that the local governments can play a significant role in identifying the wastes that are generated.

I think what has been mentioned about the problem of a lot of the generators not knowing they are actually producing hazardous waste, must be addressed. And, like I said, I think the local governments can be a key in that issue.

Mr. LEWIS. In what order should reclamation be made as far as the funding for reclamation? Should the generator be required to pay this? We have problems where we have had generators from 10, 20 years ago causing problems today; and some of those companies are not even in business, or individuals are not even around.

So what steps should be taken to require the reclamation or cleanup after their hazardous act? Should local government be required to do that?

Ms. RUHL. Are you asking me?

Mr. LEWIS. Yes, ma'am.

Ms. RUHL. First of all, I think that brings up a good point when you are talking about the justice of imposing certain financial requirements on certain industries. To my knowledge, the tax that has created the Superfund comes from generators of chemicals and not necessarily generators of hazardous wastes.

Mr. LEWIS. That's correct.

Ms. RUHL. Therefore, you have many people in the industry who are having to assume the responsibility for something that they didn't create. I think that we need a multibased source of funding.

I do think that we should receive money from generators of hazardous waste. I think, where possible, the local government should provide resources; but perhaps it should be in the form of action and in-kind services as opposed to the actual dollars and cents, which many local governments don't have.

I think that the question is finding the money where it is at. And it seems that, to date, a lot of the money does reside in the indus-

trial sector and therefore they should have a role in cleaning up the sites.

Mr. LEWIS. From your role with the Legal Environmental Assistance Foundation, do you feel that disposal sites should be precluded from the State of Florida?

Ms. RUHL. It does appear that landfills in Florida are inappropriate; that because of the proximity of the ground water to the surface, you would be creating a tremendous amount of problems if you did have landfills.

However, I do think that Florida can, and should, assume some responsibility for the other alternatives, including the recycling operations, and possibly incineration if it is done in appropriate fashion.

There are other things that the State of Florida could be doing, such as developing transfer stations so that citizens in the State of Alabama who are receiving Florida's waste can have their risk reduced. Instead of having 15, 20, or 30 trucks coming down bad country roads going to the Emelle facility, you can have one or two.

So there are a lot of things that the State of Florida can do besides actually putting in a landfill.

Mr. LEWIS. Have you had the opportunity to see the proposed legislation that Florida is working on today?

Ms. RUHL. I have, and it looks very good.

Mr. LEWIS. Do you know if it covers those areas that we are discussing right now?

Ms. RUHL. I think it does. It is encouraging to see that.

Mr. LEWIS. How about the Federal Resources Recovery Act; do you feel that covers the areas necessary to meet today's requirements as far as hazardous waste disposal and transfer?

Ms. RUHL. I think that the legislation itself is there. Unfortunately, the emphasis placed on particular provisions by the Environmental Protection Agency has been inadequate. There are provisions within the Resources Conservation Recovery Act which do require recycling, which do require the alternatives. But, like I said, they have been completely ignored by the agency, and that has been a significant problem.

Mr. LEWIS. I think you will see that changed.

Ms. RUHL. I hope so.

Mr. LEWIS. Thank you, Mr. Chairman.

And good to see you, George.

Mr. MACKAY. I would like to thank all of you for being a part of this hearing this afternoon. We are trying to focus attention on the smaller quantity hazardous waste generator, and I hope we are coming across as saying that we think local government has got to play a very central role in that.

Your testimony has been very helpful. Thank you very much.

Mr. MACKAY. Our next panel will be a local government panel: Mr. Lee Vause, Ms. Carol Bellamy, Mr. Michael Sittig and Mr. John Thomas.

Is there anyone here on behalf of Mr. Thomas? If not, I will ask Ms. Gayle Nelson if she would care to participate in this panel, commissioner panel.

Ms. NELSON. I think the mayor and chairman can adequately represent my belief. Thank you.

Mr. MACKAY. Thank you very much. We will just ask you, if you would like, to make any statement you care to make. If you have prepared testimony, it will be part of the record. So you can summarize or make any statements you would like, and then we would like to ask questions when that is completed.

Mr. Vause.

STATEMENTS OF LEE VAUSE, CHAIRMAN, LEON COUNTY BOARD OF COUNTY COMMISSIONERS; CAROL BELLAMY, MAYOR, CITY OF TALLAHASSEE; AND MICHAEL SITTING, LEAGUE OF CITIES

Mr. VAUSE. Thank you, Congressman. It was refreshing to hear my colleague say that I would represent her views. I don't think I have ever heard her say that before.

Mr. MACKAY. I was thinking that she might want to rebut later on. [Laughter.]

Mr. VAUSE. Let me say, also, that it is interesting to note what a very good hatchery the Florida Legislature is for a Congressman. It has been interesting to see the panel in action this morning.

I am Lee Vause. I am serving as chairman of the Board of County Commissioners of Leon County. And, on behalf of the County Commission and the citizens of Leon County, let me welcome you to Tallahassee and let me applaud the leadership that this committee is taking in an area that is a fundamental issue not only, of course, here in Leon County, but throughout the country.

I do not have a prepared text, but I will be happy to provide a synopsis of what I have to say later.

Leon County—and I don't have to provide you with a basic explanation of what we are, because, indeed, most of you, in fact, all of you, have served here in government in Leon County in the past—but just to recap, of course, we are a city of government, the State Capital of Florida. We are an educational community with two major universities, community college, so that our economy is fundamentally based on government and education.

We do not have a wide industrial base. Indeed, we have very little actual industry here in Leon County. We depend on government, education and the fact that we are the shopping center, if you will, of North Florida and the major retail and retail distribution center.

We expect over the coming years the continuation of an extremely high growth rate. We, being the county government and the city government, have among our goals for the future the diversification of our economy, and so therefore we will expect that in the coming years there will be some industrial development activities in Leon County.

Local government's concern with the issue of water quality and public health as it is effected by the proper management of solid waste and hazardous materials has been evidenced by certain recent activities, and is caused by our basic concern for a safe water supply.

As a Florida community, all of our potable water supply is taken from ground water. Most individuals who have private water sup-

plies are in the form of principally shallow wells; and all of the public water supply for this entire area comes from the Floridan aquifer.

We are concerned about the possible contamination of that aquifer from several sources, including, but not limited to, the improper disposal of hazardous waste; the improper handling, particularly in terms of underground storage, of things that are not considered to be hazardous waste necessarily but hazardous material, as in the case, for example, of gasoline; the misuse of pesticides; and, as Ms. Carr pointed out, the misuse of certain fertilizers and the harmful effects of urban storm water runoff.

There are three recent examples—and I think you have already heard from one of them this morning—I was not here for his testimony—but Mr. Windham's experience with the contamination of his private well at his home. Not only did he incur, and does he continue to incur, substantial personal expense, but the anxiety that his family faced, and continues to face, as a result of this occurrence is one that we here in Leon County would like to take every step we possibly can to prevent in the future.

We have a service station locally, which over a short period of time discharged some approximately 15,000 gallons of gasoline into the earth. The effects of that, of course, are not even measured. And in a neighboring county, we have an activity that is even now ongoing—or, in any case, it has just now ended—and through the mishandling of certain chemicals of a processing and distribution plant in Jefferson County, contamination of the ground water has resulted with possible future consequences not only there but here.

In Leon County we have taken a step, together with the city government of Tallahassee, and contracted with Florida State University, a most important activity which consists of inventorying, if you will, the extent of the problems that exist here in Leon County; the potential problems associated with hazardous waste; the potential problems associated with abandoned or no longer used government landfills; the problems that are generated by small businesses, particularly in Leon County, since we have no major industrial activities here.

Most small businesses, we feel, are willing to undertake reasonable steps to protect against harmful effects of the disposal of their solid waste; but, in many instances, they are totally unaware that they are mismanaging their solid waste activities.

We feel that the inventorying of these activities and the potential development of certain management techniques that we can offer to them will go a long way towards assuring that we protect the ground water resources of this area.

We feel, Mr. Congressman, that it is very important that the Congress recognize that local governments are in the best situation to begin to deal with this type of activity, and we applaud the effort and the interest that you are showing in it.

Thank you.

Mr. MacKAY. Thank you, Mr. Vause.

Ms. Bellamy.

Ms. BELLAMY. Thank you, Mr. MacKay.

Let me add to Chairman Vause the welcome of the city of Tallahassee to you who are meeting here in the State capital today. We are pleased to participate in this hearing to address this topic.

I have given you copies of the remarks that I will make, and there also is a newspaper clipping that I have made available to you that I would like to refer to at the end of my remarks.

Much of what I will say will sound like an echo of what Mr. Vause has just said, and this will, I think, reinforce the impression that you will receive concerning this community and region.

The starting point in Tallahassee for our concern with hazardous waste has got to be maintaining the purity of our drinking water. In Tallahassee we are extremely proud and fortunate to have water of a very high quality. It is better than average compared with the water throughout the rest of the State. In fact, I am told that the State department of environmental regulation chemists use samples from Tallahassee's ground water in their lab as a standard against which to measure water from other parts of the State.

I would like to emphasize further that not only is our good quality water a valuable resource to us from a health and convenience standpoint, but this is the only source of water available to our residents for drinking water. It comes, obviously, from the Floridan aquifer, a ground water source.

Furthermore, having water of such good quality is an economic benefit for our residents. We have not done a detailed study on this, but we quickly estimated what we are saving in terms of cost avoidance by not having to have more expensive water treatment.

We do not need water treatment plants and facilities at the present time. And if our ground water should become polluted, it would cost very roughly \$60 million to build a treatment plant and to modify the distribution system for the area that we presently serve. We estimate that this would cause our customers' water bills to double.

As Mr. Vause has already referred to a troubling situation within Leon County, when evidence of this tainted water was discovered in a private well, the county initiated a study to identify hazardous waste sources in the county, and the city quickly joined with the county to fund and pursue this study.

Through it, we hope to locate the potential sources of pollution, locate all existing and closed dumps and landfills and recommend solutions and safeguards. I think I am correct in saying that the study is projected to be finished by December 1984. We are becoming increasingly aware of problems in our region which pose potential threats to our water, which we value so highly and in general to the environment, which affects the health of our citizens.

We are aware that even the small hazardous waste generators can cause a problem when their combined waste is dumped, disposed, deposited in a central site, such as our present county landfill. In other locations, we are aware that such wastes have leached into the ground water and are found after the fact to cause a very serious problem.

We are also aware that illegal dumping presently takes place in Tallahassee, both into the sewer system and on land. The sewage treatment plant employees report that on various occasions the

fluid coming into the plant, the influent has smelled like, they call it, a paint and body shop. There is so much solvent and other fluids that have been poured into the sewer system through illegal dumping of those wastes.

Apparently, if you can open a manhole cover and fit it into a four-inch pipe, you can dump it into the sewer system; and that is where it goes all too often.

Furthermore, we are becoming increasingly concerned about our vulnerability to accidents that might occur because of various forms of interstate or even intrastate shipping. We have three railroad lines that come within the city limits, as well as an interstate highway, which touches us on the north side.

We know that hazardous materials are transported within our jurisdiction by these routes, and accidents could occur here as they have in other communities. In this connection, we would become increasingly concerned about who actually knows what materials are being transported or stored in Tallahassee, who would be responsible for cleanup or for organizing the relief activities surrounding an accident. We know that our residents will be calling us for answers to these questions if an accident occurs.

Finally, another area of the problem, we are increasingly mindful that even if we take strong action locally based, perhaps, on the study that is ongoing, no matter how stringent our ordinances and regulations might be concerning hazardous waste disposal or clean-up of current problems, we remain very vulnerable to the activities of others outside of our control, either city or county.

We are literally powerless to regulate or clean up beyond our borders, and the political will may or may not exist beyond our territory. That is stating the obvious, but it needs to be said every time local officials speak to an issue of this kind.

It is also obvious from a city standpoint that the more cities there are in a county, the further compounded this problem would be. So we are working jointly to address our problems in this area.

But if you had a multitude of cities within a county, you could even have cities with different views. So there is a limit to how far we can go to address the problem. In other words, local government is vitally necessary to address and solve the problems and work cooperatively and take responsibilities where we can, but we are not sufficient in and of ourselves to deal with this particular issue.

As a partner in the solution, we offer detailed familiarity with our territory, which means that we can be vital to identifying the various local waste generators, particularly the smaller they get. But we also believe that at the higher levels, Federal regulation possibly is the place where it could be made possible to reclaim, reuse, and dispose of hazardous waste.

In other words, the standards should be set at a level that would affect everyone—not just come from a local government. And if these standards and regulations are set in any unrealistic kind of way, we will feel more illegal dumping. So we know that we have to be realistic about the situation or we will suffer the consequences, and continue to, locally.

We believe strongly that a regional approach initiated by the Federal Government would be probably the proper way to ap-

proach the accident situation and the problem of managing a response to accidents.

We have not yet had accidents of that kind—I think it is correct—within Tallahassee, but we feel vulnerable to that happening at some point in the future. We think resource recovery would be an important part of this program, the recycling of hazardous waste, and that that too should need to be coordinated on a regional or Federal level.

Scientific expertise is essential in the identification and management of hazardous waste, but it is very costly. And this too would need to be provided at a regional or Federal level.

Local governments certainly don't have the financial resources to provide the necessary scientific expertise in all of the 67 counties or the multitude and hundreds of cities in this State alone. Even if we had the funds, it would be tremendously duplicative and wasteful for each of us independently to try to hire and have on staff the appropriate expertise.

Another point in favor of regional and Federal involvement is that overlapping jurisdictions within a county or competing interests between counties and unequal capabilities in terms of resources or even political will also point to the need for a larger entity than Federal Government to coordinate hazardous waste problem solving.

A final point in this regard is that, concerning the siting of hazardous waste facilities, at the local level we would believe that to the greatest extent possible, hazardous waste facilities should be located in the region where the wastes are generated. This proximity would allow closer monitoring between the generation and disposal of wastes.

Also, this proximity would minimize the cost of transportation, whether it is a public cost or a private cost, and it would reduce the potential for accidents en route between the generator and the disposal site.

Further, if there is a perception of risk associated with such a facility, the risk should be borne where the benefits are received. I think we in north Florida are very mindful of this principle and want to protect our region on behalf of our residents.

Finally, I would call your attention to the newspaper clipping which I have provided to you, and this concerns a situation that Mr. Vause referred to which is less than 20 miles away from Tallahassee. I believe it pretty well demonstrates the dilemma of local government.

[The material referred to follows:]

The story spills out about Lloyd plant

By GEORGE THURSTON

Special to the Democrat

When Gulf States Chemical Co. closed the doors to its Lloyd plant in April, Jefferson County residents thought they could breathe easier.

Now they're not so sure.

"I think what that outfit is going to do," fumed Lloyd resident Jo Vincent, "is sell the plant, move out and shoot us a bird on the way."

The six acres Gulf States left behind, and which it is trying to sell, are saturated with toxic and hazardous chemicals. Some are known to cause cancer.

State Department of Environmental Regulation tests have shown that pollution from the plant is entering the Floridan Aquifer, source of most drinking water in North Florida. And it will spread, agency officials warn.

The agency has charged Gulf States with 16 violations. Those charges could cost the company millions of dollars in fines and cleanup costs.

After numerous delays, agency and company officials met Thursday to chart a cleanup course. The agency gave Gulf States 10 days to present a plan to measure the degree of pollution and devise a satisfactory way to remove it — or be prepared to go to court quickly.

Still, no one knows when a cleanup may begin, whether the state has the muscle to force one anytime soon, how successful a cleanup may be, how much it will cost, or whether the company really can pay for it.

"There's no need for panic," said Terry Cole, assistant secretary of the department, "but the fact that these chemicals are already in the aquifer adds urgency."

'The problem is that the court system is not efficient or effective in the short term. We have no agency that can step in and stop a violation immediately.'

— attorney Tony Bajoczky

Urgency is no new feeling for these residents. Nor is anger.

Most of the anger is directed at Gulf States. At least two families say a 1979 chlorine-gas spill caused by the company's "gross negligence" permanently damaged their health. They are seeking \$2 million in damages.

"The problem," said their Tallahassee lawyer, Tony Bajoczky, "is that the court system is not efficient or effective in the short term. We have no agency that can step in and stop a violation immediately."

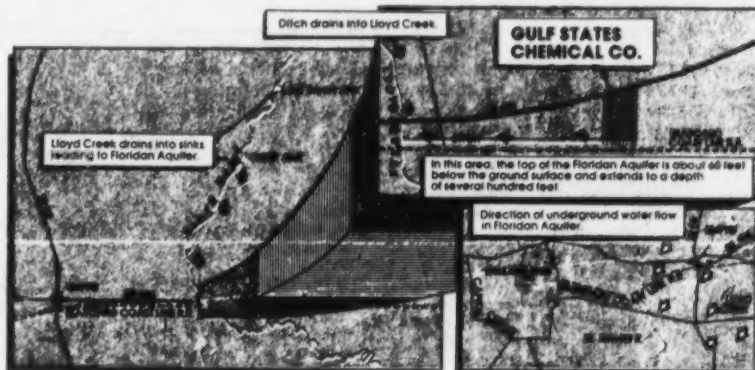
Some of the residents' anger was directed at the agencies they think should have protected them but didn't.

"Nothing was done," said Jefferson County Building Inspector Eddie Justice, "because Gulf States kept telling DER that they weren't doing anything wrong."

Environmental Regulation officials say they don't have enough resources to check every reported violation. Legislation under consideration now would help.

"It is very difficult for an agency our size to handle 50 cases — let alone the 230-some

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Democrat map by Sam Westbrook

Map shows sites of Gulf States plant and Floridan Aquifer

Chemicals

(Continued from page 1A)

we're trying to cope with right now," Cole said.

And from the beginning, said the officials, Gulf States failed to cooperate.

Gulf States officials won't comment. The Democrat tried more than a dozen times over a month to interview President Donald Moran. Finally, April 29, Moran issued a statement at company headquarters in Suffolk, Va., refusing to discuss the matter because, he said, he had been misquoted too often in the press.

At Thursday's meeting, Vice President Kenneth Moran, the company president's son, also refused to talk to a reporter.

Former employees testified in September that the company routinely falsified water samples sent to a laboratory for testing. When the company belatedly applied for a permit, agency officials say, it listed only a few of the chemicals it dealt with.

"In hindsight," said Cole, "we would have handled Gulf States differently if we had known all the chemicals they handled there."

Four years ago, Gulf States' neighbors — and Environmental Regulation — found out just how hazardous one of those chemicals was.

The chlorine spill

About 4 a.m. on June 18, 1979, a Gulf States employee was working alone in the plant — in defiance of federal safety regulations. He was transferring chlorine from a tank car to a smaller tank.

That was standard procedure. The company purchased railroad-car loads of chemicals — most of them rated "toxic" or "hazardous" by the federal Environmental Protection Agency. Company employees then repackaged them into smaller lots for industrial resale.

This time, though, a valve failed.

According to widely varying estimates, anywhere from 75 pounds to a ton of the deadly yellow-green gas spilled into the balmy predawn air and drifted across nearby homes.

Residents, jolted awake by the burning in their eyes and throats, fled the area and notified the sheriff's office. Deputies and volunteer firefighters evacuated more than 100 people. Nineteen needed medical attention.

Among them were the families of Buddy Satterfield, a civil engineer who works in Tallahassee, and Amos Henderson, a cattle farmer.

They're seeking \$2 million in damages. Trial is scheduled for January.

Inhaling chlorine causes permanent scarring of lung tissue, and the final effects may not become apparent for years. Satterfield's son Brent, now about 10, has asthma, the lawsuit says, so the effects may be worse.

Days after the spill, speaking before the Jefferson County Commission, Satterfield said of Gulf States, "That industry is incompatible to everybody living in the community."

That industry was one that neither state nor federal environmental agencies even knew existed. It had not applied for operating permits.

It had applied only for county construction permits. That application, filed in 1975 for an office and warehouse, hadn't said the warehouse would contain liquefied chlorine gas or any other dangerous substance.

At the meeting Thursday, Tallahassee consulting engineer Les Thomas, assisting Gulf States, told agency officials: "We advised you what we were handling. . . . We felt like we had been doing it by the numbers."

Replied Robert Kriegel, head of the agency's Northwest Florida district office: "Had you gotten a permit when you should have and abided by the terms of that permit, you wouldn't be here today."

Even if the state had known about the chlorine, it couldn't have acted.

"Chlorine leaks are not in our jurisdiction," Cole said. "That would be an OSHA problem."

OSHA is the federal Occupational Safety and Health Administration. The administration's area director, Richard M. Bayoub of Jacksonville, said his agency had no power to protect the general public from such industrial hazards.

"We only have jurisdiction where an employee-employer relationship is involved," he said.

His agency fined the company \$500 in 1979 for failing

to correct safety problems, but withdrew the fine a week after the chlorine spill — citing the company's "good faith and efforts to correct the matter."

The Environmental Protection Agency has authority to move in after such a spill, says Gordon Kenna, of the agency's office in Atlanta. But, he said, no one notified them.

Why didn't Florida notify them? Said Kriegel of Environmental Regulation: "We probably felt that [Gulf States] had the problem adequately taken care of."

The only agencies that responded were the sheriff's department, Lloyd's volunteer fire department and the county commission. The commission promptly adopted a strong ordinance imposing safety measures on the company. Local officials say the company ignored it.

Fouling the water

Chlorine, Jefferson County residents discovered, was only one of the dangerous chemicals leaking from the plant.

Investigations by Environmental Regulation eventually disclosed that the company also was spilling or dumping onto the ground chlorinated organic solvents, formaldehyde and wash-water containing other chemicals known to cause cancer, as well as strong acids and alkalis. Court testimony and state records suggest the amounts could have been thousands of gallons a month.

Spills are serious. Because the land beneath this area is porous as Swiss cheese, anything spilled on the ground finds its way into underground waters.

Pollutants reaching Lloyd Creek would flow into Lake Drain and Creek sinks, which funnel water directly into the Floridan Aquifer.

That's the water Jo Vincent drinks.

Vincent was one of the first residents to complain to Environmental Regulation — and is outspokenly critical of the agency's response.

"My friend and I watched as a man [working for Gulf States] rinsed barrels and dumped them in the ditch," she said. "That must have been in April or May 1981."

"That ditch leads directly to Lloyd Creek. But when I called DER about it, [agency officials] told me to see if they did it again and take some pictures next time. They treated us like hysterical women."

Agency files carry no record of her call. It wouldn't have been enough to trigger an investigation anyway, Cole said.

"We get literally thousands of public complaints. The demand for our services is far beyond our ability to respond," he said. "It was only when employees of Gulf States began telling us that things were happening that we moved in."

That was last September, four years after the chlorine spill and 17 months after Vincent's complaint about groundwater pollution.

Justice, the building inspector, said former employees of Gulf States had told him they'd been ordered to tamper with water samples from the plant.

The state required the plant to take samples, have them tested and report the results to the agency.

Results of tests on the neutralized samples indicated that the company had complied with water-purity regulations when it actually had not, said Geoffrey Watts of the agency.

Because employees had told him the water at the plant "tasted funny," Justice said, he asked the state Department of Health to sample the drinking-water well there.

The health department found the water seriously contaminated and told employees not to drink it.

Meanwhile, Justice's complaint got Environmental Regulation's attention.

"We had people in there in two days [after the health department's report] in a full-fledged unannounced inspection," said Cole. "We had test results within one month and a case report in another month. We took time to resample in December."

Results showed that all the test wells and the drinking-water well were contaminated with organic compounds known to be hazardous to human health — and not authorized to be handled by Gulf States.

Tests on wells at nearby homes found no sign of pollution. But agency officials say it's only a matter of time — no one can say just how much — before groundwater and

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Chemicals

(Continued from page 10A)

perhaps nearby wells become contaminated.

Thomas, Gulf States' engineer, suggested at the Thursday meeting that other polluters might have been at least partly responsible for the contamination.

"We found a number of chemicals that Gulf States has never handled," he said.

Kriegel replied: "Some of them could be decomposition byproducts of your chemicals. Because you handle these hazardous chemicals, you assume responsibility for them."

Nearly two months ago the agency served Gulf States a formal notice of 16 violations of state regulations, including:

- ✓ Allowing chemical wastes and pollutants into groundwater.
- ✓ Failing to complete construction of a spill-control facility.
- ✓ Failing to keep a full-time employee running its pollution-control facility.

Cleaning up

How do you clean up pollution that has soaked far into the groundwater?

One way, said Cole, would be to pump water out of the plant's 220-foot-deep drinking-water well and spray it into the air. That process would allow volatile chlorinated hydrocarbons, the most dangerous pollutants, to escape harmlessly diluted in the air.

The purified water then could be used to flush other chemicals out of the drainage ditch leading to Lloyd Creek, and to flush the creek to remove the less toxic acids, alkalis and salts. Or it could be recycled back into the aquifer.

Any cleanup will be costly. Florida law requires that the company pay.

"We have no way of knowing if this will cost \$1.5 million or what..." Gulf States Vice President Moran told agency officials Thursday. "We want to try to do the right thing. We are a small corporation, and the expense of doing it might be too much."

Replied Kriegel: "It's going to cost a lot of money, but if we have to take you to court, we will ask the court to assess the maximum possible penalty for every one of those violations."

The maximums range from \$10,000 to \$25,000 per day.

Kriegel had said earlier that he was concerned about collecting cleanup costs. Agency attorney Jeanie Williamson told Moran on Thursday: "Just because the company is for sale does not relieve you of responsibility for what happened there."

Lawyers say judgments against a Florida company can be collected from its out-of-state parent company.

No financial information about Gulf States or its par-

House to debate bill Monday

The Florida House of Representatives is scheduled to debate a bill Monday that would help the state in its efforts to more closely monitor companies such as Gulf States Chemical.

Called the Water Quality Assurance Act of 1983, the bill would greatly increase the money available for cleanups and would add about \$20 million for additional personnel and general operations.

The bill is still in committee in the Florida Senate.

ent, United Chemicals Inc., is publicly available. Both are family-owned corporations, not traded on the major stock exchanges or over the counter, and not listed by major business directories or financial services.

What Kriegel wants is not a court fight but a consent order: "an agreement between this department and Gulf States on what we want and what you will do."

He told Moran, who had no lawyer with him Thursday: "It's going to take you a lot of homework to work up a substantial offer. It would be advisable to have your attorney contact us."

Afterward, Kriegel told the Democrat: "We want it done in a hurry."

Whether the cleanup actually gets done in a hurry remains to be seen. Williamson conceded that legal delaying tactics are available to Gulf States, the easiest being a request for an administrative hearing.

If all efforts to pry money from the company should fail, Cole said, the Environmental Protection Agency's superfund could be used to clean up the mess.

Meanwhile, there Lloyd sits — No. 22 on Environmental Regulation's April list of 56 top-priority cases.

Kriegel said there was no immediate danger to drinking-water supplies in the Lloyd area. The pollution below the Gulf States property, he said, is still limited. The immediate need, he said, is to tackle the problem before it gets worse.

The long-range need in the department, Cole said, is more people to detect and stop such problems early.

"We have four inspectors from the Apalachicola to the Aucilla River," he said. "And we have one enforcement lawyer for the whole Northwest Florida district."

The Legislature is considering a bill that would help. Called the Water Quality Assurance Act of 1983, the bill is ready for debate in the House on Monday, and is still in committee in the Senate.

It would greatly increase the money available for cleanups, Cole said, and would add about \$20 million for additional personnel and general operations.

Cole said the improvements were badly needed.

"The state pays more money for mowing the grass along the highway," he said, "than it provides for our whole agency."

Pollution cleanup at plant in Lloyd is a step nearer

By GEORGE THURSTON

Special to the Democrat

5/14/83

The cleanup of groundwater pollution around the Gulf States Chemical Co. plant in Lloyd moved a step closer Friday and could begin within weeks, according to a state official.

Gulf States closed about four months ago as the state investigated a history of chemical spills at the plant dating from at least 1979. The Department of Environmental Regulation charged the company with 16 violations of polluting area groundwater.

Robert Kriegel, manager of the agency's Northwest Florida district office, said the company has agreed "in concept" to cleanup demands.

The only point still not settled with the company, said Kriegel, is \$70,000 demanded by the agency in payment for damage to the environment.

Kriegel met for about three hours Friday afternoon in Pensacola with Gulf States' vice president Kenneth Moran and the company's two lawyers.

Kriegel told the Democrat that time will run out on the company's legal options at 5 p.m. Pensacola time Monday. By then, he said, Gulf States must agree to all the agency's demands, refuse to agree to them, or file a request for an administrative hearing.

"If they don't agree," said Kriegel, "or if they ask for an administrative hearing, we will take them directly into circuit court."

He explained that an administrative hearing process could become "quite protracted." To prevent its use as a stalling tactic, Kriegel said, he will move directly into the state court system, as the law permits.

Moran has repeatedly refused to talk to the Democrat.

"The agency's posture is that the \$70,000 damage figure is conservative," said Kriegel. "We don't feel that it is negotiable. If we have to go to court, we will ask for a lot more and will probably get it."

Kriegel told the company repeatedly that if he moved the dispute into the courts, he would ask the court to impose the maximum possible penalties in addition to the costs and expenses that the agency now demands.

Some of the violations charged against the company could bring penalties as high as \$25,000 for each day the violation occurred over a period of several years — potentially totaling millions of dollars.

Water samples tested in the fall showed that all the test wells and the drinking-water well on the Gulf States property were too polluted to drink. Samples taken from wells at nearby homes showed no indication of pollution.

The company's contaminated wellwater came from 220 feet below the surface of the ground, said agency officials, indicating that pollution had reached the Floridan Aquifer, the major source of all drinking water in the area.

Ms. BELLAMY. Serious pollution problems have been identified in a neighboring county which posed a potential—not proven but a potential—and very serious threat to Tallahassee's ground water source.

Chemical contamination has been widely reported at this site, both on land and in the drinking water wells there. Speaking for the people and the government of the city of Tallahassee, we feel very vulnerable to this problem and this situation which lies well outside our jurisdiction and, therefore, we are powerless either to prevent it or to cure it.

We are eager to work with the State, the regions in Florida, and Federal Government in addressing these important problems.

[The prepared statement of Carol Bellamy follows:]

TESTIMONY OF MAYOR CAROL BELLAMY TO THE
U. S. HOUSE OF REPRESENTATIVES
COMMITTEE ON SCIENCE & TECHNOLOGY
MAY 16, 1983

Maintaining the purity of our drinking water is the starting point for concern with hazardous waste in Tallahassee.

1. The water quality in Tallahassee is better than average compared with the water in the rest of the state.

*In fact, State Department of Environmental Regulation chemists use Tallahassee's ground water in their lab as a standard against which to measure other samples.

2. Not only is the local water quality a valuable resource, but its source--the Florida aquifer--is the only source available to provide water to our residents.

3. The high quality of the water is both a health and an economic benefit for our residents.

* We have no need for a water treatment plant at the present time. If the ground water should become polluted, it would cost approximately \$60 million to build a treatment plant and modify the distribution system. This would cause our customers' water bills to double.

4. When evidence of tainted water was discovered in a private well in Leon County (outside Tallahassee), the City joined with the County to commission a study which will identify potential sources of pollution, locate all existing and closed dumps and landfills, and recommend solutions and safeguards. The study is projected to be finished by December, 1984.

We are increasingly aware of problems which pose potential threats to our water and the environment affecting the health of our citizens.

1. Small hazardous waste generators can cause a problem when their combined waste is dumped in a central site, such as the present County landfill. In other locales, such wastes have leached into the ground water.
2. Illegal dumping does take place in Tallahassee into the sewer system and on land.
 - * Sewage treatment plant employees report that on some occasions, the plant's influent has smelled like a "paint and body shop" due to illegal dumping of solvents and other waste into the sewer system.
 - * If you can pour the waste into a 4-inch pipe, you can dump it into the sewer system.
3. Tallahassee has three railroad lines and an interstate highway within its boundaries. We know that hazardous materials are transported within our jurisdiction via these routes and could be involved in accidents as has occurred in other communities.
 - * Who knows what materials are transported or stored in Tallahassee?
 - * Who is responsible for clean-up if there is an accident?
 - * Our residents will call us for help in the cast of an emergency.
4. Even if we pass stringent hazardous waste disposal ordinances and clean up any current problems, we remain vulnerable to the activities in surrounding counties.
 - * We are powerless to regulate or clean up beyond our borders, and the political will may not exist in a neighboring county.

Local government is necessary to solve the problem, but not sufficient of itself.

1. Familiarity with our territory makes local government vital to the identification of local waste generators.
 2. Federal regulation should make it possible to reclaim, reuse, and dispose of hazardous waste. Unrealistic regulation will only encourage illegal dumping.
 3. A regional approach initiated by the federal government would be one way to approach the problem of managing response to a serious accident.
 4. Resource recovery--the "recycling" of hazardous waste--could be done on a regional basis by the federal government.
 5. Scientific expertise essential to the identification and management of hazardous wastes is costly and should be provided on a regional or federal basis. Local governments do not have the financial resources to provide such expertise in 67 counties and hundreds of cities, and it would be a wasteful duplication of effort if they did.
 6. Overlapping jurisdictions, competing interests, and unequal capabilities all point to the need for a larger entity than local government (like the federal government) to coordinate hazardous waste problem-solving.
 7. To the greatest extent possible, hazardous waste facilities should be located in the region where the wastes are generated.
- * This proximity would allow closer monitoring between generation and disposal.

- * Proximity would minimize the costs of transportation and reduce the potential for accidents en route.
- * If there is a perception of risk associated with such a facility, it should be borne where the benefits are received.

I would close by calling your attention to a situation less than 20 miles away which demonstrates the dilemma of local government. Serious pollution problems have been identified in a neighboring county which pose a potential and serious threat to Tallahassee's ground water source. Chemical contamination has been widely reported at this site--both on land and in drinking water wells. The City of Tallahassee is vulnerable to this problem outside of our jurisdiction and powerless to prevent or cure it.

Mr. MACKEY. Thank you, Mayor Bellamy.

Mr. Michael Sittig, on behalf of the League of Cities.

Mr. SITTIG. Thank you, Mr. Congressman, Mr. Chairman.

I am Mike Sittig. I am the assistant executive director of the League of Cities. I have some prepared remarks that I submitted last Friday, but I would like to briefly go over those.

I have four quick points and I will be as brief as I possibly can.

First of all, I would like to say that I am not an expert in the hazardous waste field. I am more of a generalist. We represent the 400 Florida cities on over 400 various issues each year.

I would thank you also for the opportunity to speak to you today about the serious problem of hazardous waste disposal and talk about how it affects city governments and the role that city governments should play in the hazardous waste management program.

Most of the discussion today and most of the reports that I have read refer always to local governments. I would bring that to your attention—in fact, Congressman MacKay, you even mentioned that earlier today—that there is a difference between city governments and county governments, and many areas in this State are very urban and very dense and they don't have the one city per county like we do in Tallahassee and Leon.

Congressman Lewis can tell you that there are some 37 cities in Palm Beach County.

If we talk about the role of local governments, we are going to be very duplicative if we don't talk about the roles of city governments as opposed to the roles of county governments, in our opinion.

I would also say that we do want to be very cooperative. When Representative Sheldon had the hazardous waste legislation in the past, we were very active in that legislative process and opposed Representative Sheldon on the siting provisions of his bill.

We have since turned around somewhat, and I believe that we are acting very responsibly now trying to realize that the hazard-

ous waste management problem is a statewide problem. It is a very serious problem that affects the environment and the water supply to our citizens.

The House and Senate bills that you heard discussed this morning do have the ability to override local zoning but we have not opposed those hazardous waste packages. I think we have been very responsible in our working with the House and Senate people on those issues.

OK, now I will cover the four issues that I would like to touch on quickly. Landfills: You have heard all morning, and we completely agree, that in Florida the landfills that receive this toxic and hazardous waste materials need to be cleaned up, whether they are authorized or unauthorized landfills.

We need to carefully monitor and provide selected acceptable sites for such wastes in the future also.

You are well aware that the permeability of our soil and the close proximity of our ground water supply to the surface makes continued unregulated use of these landfills potentially dangerous to our citizens because of our water supply and the fact that 90 percent of our drinking water comes from underground.

Gentlemen, cities do not have the technical knowledge or funds to monitor and clean up these sites. I am sure that that was a major factor behind the Superfund legislation. Federal and State agencies need to move rapidly in assisting and prioritizing this cleanup effort.

The siting issue, there is no question, is a very highly visible subject. It is very emotional. It is very political.

We do understand the State's concern that all citizens want to responsibly dispose of hazardous and toxic waste, but not in their own neighborhood or their own community.

We recognize that some level of government must guide and regulate this siting process. However, we believe that the officials elected locally must have a role in the siting process.

To arbitrarily come up with a program to override local zoning and planning to site an incinerator or a neutralization facility or a transfer facility will only lead to expanded citizen concern. It is a very emotional issue.

Without additional education and tremendous involvement by the leaders that they have elected locally, we believe that the citizens will become even more concerned and perhaps even suspicious.

Therefore, we want a strong role in that process at the municipal level.

The education programs are paramount. It is similar to the issue of siting a resource recovery facility or a sewage treatment plant or a prison in an area. But this is probably even more emotional because of the lack of understanding by the public.

We believe with a good educational program, the public will see just how important this is to them, their environment and their drinking water. We believe that locally, we could sell them on the issue of facilities and transfer facilities.

On the transportation of hazardous waste, our biggest role should be the regulation of routes. Whether it is done by cities or

counties, or the State, it is very important. Those routes should be as far away from densely populated areas as possible.

You can certainly understand our concern. There is a substantial increase in the potential for fatalities or illness if spills were to occur in highly populated areas.

On the question of emergencies, the potential for hazardous waste emergencies is probably our principal concern. We have poorly managed hazardous waste disposal in this country, basically by ignoring it. We have also been negligent when it comes to planning for hazardous waste emergencies.

I was delighted to hear the extensive discussion by the Federal people from Atlanta on this issue and was not even knowledgeable myself that a lot of that information was available and that a lot of that training was going on.

Government does have a responsibility to provide the people, the training, the equipment to deal with such emergencies to protect the public. Cities just don't have the unilateral capacity or the resources to accomplish this goal.

We suggest that regional hazardous waste emergency stations be established, similar to what Mayor Bellamy was talking about, throughout the State, properly funded, properly equipped to respond to a spill or other kinds of hazardous waste emergency.

Perhaps these regional stations could be called upon by cities or civil defense personnel for assistance in the case of an emergency.

We believe that our personnel should be trained and we need assistance in that training, no question. But we believe that our responsibility should only be in the very short run. It takes very expensive equipment and it is very dangerous to have a firefighter and/or police officer trying to become educated to handle that emergency, in any manner, other than in the short run.

There are 393 cities in Florida, and 200 of the cities have a population of under 3,000. Those small towns are just as susceptible to hazardous waste emergencies as the large cities, and they are going to be on the front line during that emergency.

We don't believe that they can be expected to have funding, equipment, and the expertise, and the other things that I was talking about, to handle a serious problem unless there is some immediate backup available from some other level of government, be that Federal, State, or civil defense or whatever.

In conclusion, gentlemen, we ask that you continue to assist in cleaning up the landfill problems; that you work with the cities and also the counties in the siting process; help us in regulating transportation routes; and, also draw on the expertise of your Federal and State people to initiate and implement hazardous waste emergency planning programs.

I appreciate the opportunity to be here. I would be glad to try to answer any questions that you may have.

[The prepared statement of Michael Sittig follows:]

PREPARED STATEMENT OF MICHAEL SITTIG, ASSISTANT EXECUTIVE DIRECTOR, FLORIDA
LEAGUE OF CITIES

The MUNICIPALITIES' Role in Hazardous Waste Programs

My name is Mike Sittig. I am the Assistant Executive Director of the Florida League of Cities. Thank you for this opportunity to speak with you about the serious problem of hazardous waste disposal in this state and how it effects local government.

HAZARDOUS WASTE LANDFILLS

The waste disposal landfills in Florida that receive hazardous and toxic materials must be cleaned up, and soon! Also, we must carefully monitor and provide selected, acceptable sites for such wastes. The permeability of our soil and the close proximity of our groundwater supply to the surface makes continued unregulated use of these landfills potentially dangerous to our citizens.

Cities do not have the technical knowledge or funds to monitor and clean up these sites. Federal and state agencies need to move rapidly in assisting and prioritizing this clean-up effort.

SITING OF HAZARDOUS WASTE FACILITIES

There is no question that this is a highly visible subject. We understand the state concern that all citizens want to responsibly dispose of hazardous and toxic waste, but not in their neighborhood or community. We also recognize that some level of government must guide and regulate this siting process. However, the officials elected locally must also have a role in the siting process. To arbitrarily override local zoning and planning to site an incinerator, neutralization or transfer facility will lead to expanded citizen concern unless their local government officials are part of the siting process and extensive educational programs are initiated by government and private industry.

TRANSPORTATION OF HAZARDOUS WASTE

Local governments must have the authority to regulate transfer routes used to keep potentially toxic accidents from occurring in populated areas, if this is at all possible. Certainly you can understand our concern that there is a substantial increase in the potential for fatalities and illness if spills were to occur in highly populated areas.

HAZARDOUS WASTE EMERGENCIES

The potential for hazardous waste emergencies is our principle concern. We have poorly managed hazardous waste disposal in this country, basically by ignoring it, and we have also been negligent when it comes to planning for hazardous waste emergencies. Government has a responsibility to provide people, training, and equipment to deal with such emergencies to protect the public. Local government does not have the unilateral capacity or the resources to accomplish this goal.

We suggest that regional hazardous waste emergency stations be established throughout the state that are properly staffed, properly trained, properly funded and properly equipped to respond to a spill or other hazardous waste emergencies. these regional stations could be called upon by cities or civil defense personnel for assistance, in case of an emergency. Cities should have their personnel trained to handle the emergency in the short run only.

There are three hundred ninety three cities in Florida (one-half with a population under three thousand) that will be on the front line during a hazardous waste emergency, but they cannot be expected to have the funding, the equipment and expertise to cope with this serious problem without immediate backup from state and/or federal professionals.

CONCLUSION

In conclusion, we ask the federal and state government to: Assist in cleaning up the existing landfill problems; work with municipalities and counties in the siting of facilities; regulate transportation routes for hazardous waste; and, draw on the expertise of state and federal experts to initiate and implement hazardous waste management emergency planning programs.

Thank you for the opportunity to express the opinion of the cities of this state and I will be pleased to answer any questions you may have.

Mr. MACKAY. Thank you very much. Mr. Lewis, do you have any questions?

Mr. LEWIS. Thank you, Mr. Chairman. First of all, I would like to applaud Leon County for the fine job they are doing in the area of hazardous waste and how to handle it, and more or less make the public be aware of the problems that can exist.

One of my thoughts is why Leon County and the city of Tallahassee would become involved in hazardous waste disposal and control when it is not a very highly industrialized county or city.

Mr. VAUSE. Congressman, I think it is fair to say, and I think it is totally accurate to say, that the unfortunate experience that Mr. Windham had happen to him and his family probably was the catalyst for us beginning to become aware that indeed hazardous wastes are not necessarily limited to the output of a large industrial manufacturing concern; that, in fact, hazardous wastes are all around us and that we obviously had a site here in our own county.

And as we began to think in those terms, we asked ourselves how many other of those sites are out there waiting to happen; indeed, what practices are going on now that we might be able to eliminate or to suggest better management techniques to prevent those sites from occurring in the future, although you are correct we are not an industrial community. We do not have significant industrial hazardous waste outputs; still, the recognition, I think, that hazardous waste takes many forms.

We have an example, clear example in our own community of someone being personally affected, both financially and, as I said earlier, in an anxiety fashion.

And we decided that it was best to begin to deal with the prevention of that sort of activity as opposed to a cure. And so we did undertake the contract, I might add, with local funds. Those are all local tax dollars that we are spending.

The city, as the mayor pointed out, came onboard at the very outset, agreeing that it was a most important issue that we needed to address.

Why did we do it? Because it needed to be done.

Mr. LEWIS. Thank you, Commissioner. Mayor Bellamy, would you rank hazardous waste concerns as an important growth benefit concern for your city?

Ms. BELLAMY. Sure. It would have to be on the list of concerns. I think it is one that we are rapidly learning about very recently. I would say it is a new addition to the list.

It has not been on our list of concerns in terms of growth management for a long time, but it certainly needs to be on there, and especially from the standpoint of prevention rather than after the fact trying to solve a problem, especially if we can learn from other areas and try to prevent any worsening of problems here. To protect that valuable water resource, we must do that. We must provide a safe way to grow if it is to be healthy growth.

Mr. LEWIS. Mike, as you are aware, most of us in Congress, as well as in the legislature and various councils and commissions working throughout the State, are in the process of trying to bring in high-tech industries to stabilize our economy, certainly to our own areas, but anywhere we can in Florida.

Do you feel that the various municipalities—and the commissioner and mayor may answer as well if they care to, or comment—are up to taking a very strong position for any industry coming into their area to control the disposal of hazardous waste?

Mr. SERRIG. I think from an overall perspective that we have been in the past; not so much directly to that issue, but because of our climate and because—not just our temperature climate, but our business climate—we have been pretty successful in Florida in attracting industry without an awful lot of work.

And I think that most of the cities in the State have been geared toward light industry and the high-tech industry in the past, and did it because they didn't want the industrial problems and the smokestacks that we have seen in the East, and kind of learned from their experiences.

Specifically, I think that they would be. I think because of the permeability of our soil and because of the water problems that we have in Florida, and after seeing the expensive water problems that New Mexico has had in the past, I think that they would be.

Mr. LEWIS. Well, the reason I raise the question, after having, as you know, been in local government before my legislative work, I have noticed that we want to get these industries in, but it is always DER or EPA's responsibility to take care of that, and also many times local officials have been known to put the arm on those regulating agencies to ease up a little bit and try to speed up the permits.

But I think the role is going to have to be reversed to some extent so that the local, right up front, that the local communities, counties, are going to have to demand from these industries that they control their hazardous wastes.

Ms. BELLAMY. I would like to say that in Tallahassee and in Leon County, I think that is exactly what has occurred in the previous efforts to attract and bring in new and additional businesses and industries; that the folks who have been involved locally in seeking out those industries and trying to bring them to Tallahassee have specifically looked for clean industries and have not tried to be hypocritical about encouraging someone to locate whose activities would not be welcomed in the local community and which would create problems that the public would have to bear by the nature of the activity.

I think that we are learning that that is a more subtle and maybe complex process than looking for a smokestack to be avoided, that there are other kinds of wastes and problems created that we need to look very carefully at.

But I think it would be consistent with our pattern already in this community that we would work with businesses and industries to locate here as partners in the community and folks who would want to enjoy the quality of life and contribute to it and bear their fair share of the burden if there was one.

Mr. VAUSE. Another issue there, and the mayor made reference to it a moment ago, is that the philosophy of jurisdictions that might be a county or two removed from ours is extremely important here, though, because while we are blessed with a very healthy economy, we are a part of the State that, in many in-

stances, is not blessed with as healthy an economy as we have; and therefore there is an even more vigorous effort to attract industry and, quite frankly, there is not the selectivity, I suppose, that we feel like we have in Leon County that some of the other counties, as I say, adjacent to or a county or two removed from us would have.

They need a broader economic base far more than we do. So it is very important that while we may exercise a great deal of selectivity and be somewhat aggressive in terms of promulgating local ordinances or management techniques on new industry, it is important that there be an oversight of those activities in those adjoining counties, too.

Mr. LEWIS. Thank you, Mr. Chairman. Thank you.

Mr. MACKEY. I will ask Mr. Vause and Ms. Bellamy this question jointly.

Your landfill is pretty much typical of landfill operations operated by other city and county units throughout the State; is it not?

Mr. VAUSE. Congressman, I would have to say it probably is not. And I say that because in the past 7 years, or about 6 or 7 years ago, we had to locate a new landfill site; and we went through an enormous amount of pain and anguish and grief in doing so.

I would have to say that, particularly now, that this issue is one that has a good deal of discussion associated with it; that I have a somewhat renewed appreciation—in fact, I have a newly gained appreciation of how stringent the State Department of Environmental Regulation is and how tough they were on us in the matter of siting our landfill.

There were enormous pressures brought to bear on the Commission to locate the landfill where nobody was; that is to say, in the national forest part of the county or in the timber company lands in the southeastern part of the county, primarily because there were not too many people living approximate to it.

State regulators, our consultants advised us that, yes, you can do it there; but it is not a very safe place to do it, for two reasons: One, soil conditions don't make it safe—or make it less than safe, and the proximity to the aquifer in those areas makes it unsafe.

So we located our landfill in an area that was—in fact, I think some of the sampling we did demonstrated clay soils to a depth in excess of 200 feet. Unfortunately, that site happened to be in the path of much of the community's growth and it is a very attractive property for residential development and the like.

But, retrospectively, the decision we made at that time, I think, was a good one although I would have to confess that some of us didn't recognize that as being the case at that time.

In that sense, I think ours may be superior to the landfills that many communities have in the State; and that is primarily because they are not blessed with the type of soil conditions that we have here in Leon County.

Mr. MACKEY. In the sense of your knowing what is going into your landfill, though, do you have any better handle on that?

Mr. VAUSE. That is one of the benefits of the study that we have ongoing and one of the things we hope to gain, was that type of knowledge. We are very fortunate to be gaining that type of knowledge.

At the same time, it demonstrates a problem in dealing with what we now know because, in fact, there probably are some solid wastes being discharged or placed in the landfill that should not be placed there.

The study that we are finishing now will identify those generators of hazardous waste and we feel it will be our responsibility to assist them, in many instances, simply by making them aware of what they are doing and by making them aware that there are reasonable, acceptable alternatives to throwing it out into the container at the back of their business or, as the mayor said, pumping it into the sanitary sewer system of the city.

Mr. MACKAY. I congratulate you for making this effort. I think you are going to find yourselves a prototype for what a lot of other local cities and county governments are going to find themselves doing.

Thank you very much for your participation. This has been very helpful to us.

We have a final panel, which is an industry panel. We are not certain if the industry groups, Associated Industries or Chemical Waste Management, Inc., intend to provide testimony today verbally or whether they intend to submit written testimony.

Is there anyone here on behalf of the Associated Industries or Chemical Waste Management?

All right. We will look forward to receiving their written testimony to complete our record.

In closing, let me very briefly summarize what this hearing is all about and what we think we are learning.

The RCRA law passed in 1976 shows a realistic effort to deal with as much of the problem of hazardous waste as could be dealt with at that time.

It shows a philosophy to deal with large generators of hazardous waste, and it has Federal and State Government in the focal point.

Now, at this point, some 7 years later, States, particularly like Florida, which do not have a heavy industrial base, are beginning to realize that the combination of the so-called small generator exemption and the failure to define a role for city and county government has, in effect, left the problem not yet dealt with.

We are here on behalf of Congress. We are one committee. There are several other committees that are looking at this issue, trying to see if we can identify the role of the local government and also the best manner in which local government can interact with the business community to begin to seriously deal with this problem.

It is more of a problem in Florida for reasons that we have discussed. Just as Tallahassee and Leon County now find themselves possibly in a prototype situation, Florida may find itself—in the effort to develop a training program and an assistance program for local government, we may find ourselves in a prototype for the rest of the county.

The hearing this morning and the record from this hearing will be valuable in our effort to deal with this in the Congress, and we certainly appreciate everyone's participation.

We are not too far overdue by congressional standards. This is almost a miracle that we are this close to being on time.

Mr. Lewis, would you like to make any further comments?

Mr. LEWIS. I just appreciate the opportunity for the community to appear here and the witnesses to come before the committee to express their concerns, Mr. Chairman; and I believe the information will be valuable. Thank you very much.

Mr. MACKEY. Thank you very much. We are adjourned.

[Whereupon, at 1:03 p.m., the subcommittee was adjourned, to reconvene, subject to the call of the Chair.]

APPENDIX I

QUESTIONS AND ANSWERS SUBMITTED FOR THE RECORD

WITNESS QUESTIONS

MS. VICTORIA ISCHINKEL, SECRETARY OF THE FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION (GOVERNOR'S DESIGNEE FOR THE HEARING

1. SMALL GENERATORS OF HAZARDOUS WASTE ARE THOSE THAT GENERATE LESS THAN A TON OF HAZARDOUS WASTE PER MONTH.
2. SHOULD LOCAL GOVERNMENTS HAVE A ROLE DEFINED FOR THEM CONCERNING THE IDENTIFICATION OF SMALLER QUANTITY GENERATORS OF HAZARDOUS WASTE?
3. IS THE FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION ABLE TO ADEQUATELY REGULATE THE SMALLER GENERATORS OF HAZARDOUS WASTE AT THIS TIME?
4. IS HAZARDOUS WASTE THAT IS DEPOSITED IN SANITARY LANDFILLS CONSIDERED TO BE A PROBLEM IN FLORIDA?
5. DO YOU THINK THE LEGISLATURE'S APPROACH THIS YEAR IN DEALING WITH HAZARDOUS WASTE IS APPROPRIATE?
6. IF NOT, WHAT APPROACHES WOULD YOU RECOMMEND TO IMPROVE HAZARDOUS WASTE REGULATORY EFFORTS IN THE STATE, ESPECIALLY WITH REGARD TO THE SMALLER GENERATORS?

4. Hazardous Waste Management Program

Florida has adopted the federal hazardous waste regulations in 40 CFR Parts 260.10, and 261 through 265 by reference as state rules in Chapter 17-30, Florida Administrative Code. The regulations identify and list hazardous waste and establish standards for hazardous waste generators, transporters and treatment/storage/disposal facilities.

Chapter 17-30, Part IV establishes a permitting requirement for hazardous waste treatment, storage, and disposal facilities. This rule became effective on July 9, 1982. The permitting program is being initiated with the issuance of temporary operation permits (TOPs) to existing facilities which will allow them to operate for up to three years while coming into scheduled compliance with the Chapter 17-30 operation standards. When in compliance, operation permits may be issued to facilities for up to five years. Construction permits are issued prior to the construction of any new hazardous waste facility or for the modification of an existing facility. Construction permits are phased in for facilities which are under construction on the effective date of the rule. And lastly, closure permits must be issued by the department prior to the closure of any hazardous waste treatment, storage, or disposal facility. All facilities were required to submit a permit application to the department by April 9, 1983.

State Authorization

Florida was granted Phase I Interim Authorization from EPA on May 19, 1982. An application for Phase II Components A and B was

submitted in August 1982, but was denied due to a "default" permitting provision in Florida law. Under this provision a permit shall be deemed approved (issued by default) if the department has not acted within 90 days of receipt of the complete application. It was EPA's contention that a RCRA permit issued by default might not meet the federal requirements and therefore denied the department's application. The 1983 Legislature changes this provision by amending Section 403.722, Florida Statutes. The department resubmitted its Phase II Component A and B application on July 15, 1983 and expects a favorable decision from EPA in September or October of 1983. In addition, the department has forwarded to EPA its draft Phase II Component C application and intends to submit its draft application for final authorization in October, 1983.

Budget

Resource levels for the federal fiscal year 1983 were 40.95 work years and \$1,743,502. Of this total budget, \$1,284,545 were EPA funds under the Resource Conservation and Recovery Act.

Enforcement

It is the department's contention that there is enough enforcement personnel to ensure compliance with the hazardous waste regulations. The training and development of a qualified staff is difficult in this new and massively complex program; however, enforcement of Chapter 17-30, FAC is a department priority.

Attached are two recent memos from the Secretary and Assistant Secretary concerning the department's position on this issue. An enforcement strategy is outlined to ensure consistent and responsible action for both uncontrolled sites and RCRA violations.

5. Have you applied for Superfund assistance to provide water for the people of Fairbanks, Florida, as a result of the recent hazardous waste discoveries there?

Bottled water has been provided to Fairbanks residents whose wells have been affected by contamination from the DOT disposal pits. This is regarded as a temporary solution to the problem. An extension of a nearby Alachua County public water supply system is being considered as a permanent solution to the problem.

The DOT Fairbanks site has not been ranked for Superfund purposes. No application for the use of Superfund monies for public water supply has been made. The Florida Department of Transportation has borne all site cleanup and aquifer restoration costs to date.

Other uncontrolled sites in Florida, most notably the Hipps Road Landfill in Jacksonville Heights, have been ranked for Superfund. At this site, where plans for alternative water supplies for affected wells are being prepared, Superfund monies may be used to defray costs.

WITNESS QUESTIONS AND RESPONSES

DR. ROY C. HERNDON
DIRECTOR, HAZARDOUS WASTE MANAGEMENT PROGRAM
INSTITUTE OF SCIENCE AND PUBLIC AFFAIRS
FLORIDA STATE UNIVERSITY

- Q1: What is the nature of the hazardous waste problem in Florida and the nation?
- A1: The problems associated with hazardous waste can be divided into two categories: (1) Those problems resulting from past mismanagement or uncontrolled sites; (2) Those problems associated with ongoing mismanagement. Hazardous waste mismanagement continues despite the existence of state and federal programs and regulations. These problems exist in every state in the nation. Their solutions require an understanding of the circumstances facing both hazardous waste generators and regulators.
- Q2: Is the waste that is generated by the smaller quantity generators a major portion of the nation's hazardous waste problem?
- A2: It is important to recognize that hazardous waste per se is not the problem--only that portion of the waste that is mismanaged is the problem. Hazardous waste is typically mismanaged by smaller quantity generators and smaller firms. Therefore, throughout the nation, "the hazardous waste problem" originates primarily from smaller quantity generators. Most of these generators are not being regulated at the state and federal level because they have not been identified by the regulatory agencies.
- Q3: Why are smaller quantity generators mismanaging their waste? How are they managing their wastes?
- A3: Most smaller generators of hazardous waste are totally unaware of their legal responsibilities regarding proper management techniques. Other smaller generators of hazardous waste have some understanding of the regulations, but they view the regulatory process as complex, technical and generally geared for larger companies. Most of the smaller generators of hazardous waste are managing their wastes by flushing them down the sewer if it is liquid, or by sending it to the sanitary landfill along with other trash and garbage.
- Q4: Should the Small Quantity Generator Exemption level (1,000 kg/month) be decreased to some lower level? If so, under what circumstances?
- A4: The small quantity generator exemption needs to be clearly defined and placed in proper perspective in order to develop effective solutions for hazardous waste mismanagement problems. The small quantity exemption refers to non-acutely toxic hazardous wastes that are generated in small

monthly quantities (i.e., less than 1,000 kg/month). These wastes are exempt from certain federal regulations. Although these small quantity generators must still manage their wastes in ways defined by the RCRA regulations, these generators are not required to:

- o maintain records of waste generated;
- o inform the U.S. EPA that they are generating hazardous waste; and
- o manifest or "track" their wastes if these wastes are managed off-site.

It is important to recognize that there are basically two different types of hazardous waste generators, each type with different characteristics:

- o Large firms (notifiers) - Aware of state/federal laws and regulations that will affect them, financially better able to comply with various regulations; more informed of the legal implications of non-compliance; more likely to be inspected; etc.
- o Smaller firms (non-notifiers) - Unaware of state and federal regulations, financially less able to comply with regulations; uninformed of legal implications of non-compliance; less likely to be inspected (to be made aware of regulations).

It is also important to recognize that a gallon of spent industrial solvent generated by a firm with 10 employees can contaminate the same quantity of water and cause the same health problems as a gallon of the same waste from a corporation with 1,000 employees. The purpose for developing the exemption initially was to allow state and federal regulatory agencies to concentrate on the larger generators of hazardous waste. Administratively, it would have been too burdensome to have regulated all generators in the same way initially. It is important to recognize that most smaller quantity generators do not know of the smaller quantity generator exemption. In fact, most smaller quantity generators are unaware of most (if not all) state and federal hazardous waste regulations. Therefore, to lower the exemption to some lower level (e.g., 100 kg/month or zero) will have no effect on generator compliance unless other actions occur concurrently. In order for generators of any size to comply with regulations, they must first be aware of the regulations and understand the specific requirements of those regulations. Existing state and federal notification programs rely on voluntary notification. Most smaller quantity generators do not believe that they need to notify even if requested to do so. In order for most smaller quantity generators to be concerned about state and federal compliance, they must be identified and informed of their legal responsibilities.

Q5: How is the state of Florida proposing to deal with the smaller quantity hazardous waste generators?

A5: In proposed legislation, local governments have been given the responsibility and financial assistance to identify generators of hazardous waste and to assist those generators in identifying proper management techniques. The approach proposed is to provide local governments with a well-defined role in this overall effort. The result will be to allow local governments to fill an important regulatory gap: to identify and inform these smaller

generators of their legal responsibilities, thereby preventing future problems associated with hazardous waste mismanagement.

- Q6: Will local government hazardous waste regulatory efforts be helpful in siting hazardous waste management facilities?
- A6: A major hindrance to the development of hazardous waste management facilities is public opposition and the political aspects of elected officials complying with the desires of their constituents. This hindrance is the "not in my backyard" issue--citizens simply do not want hazardous waste management facilities close by. However, it is important to recognize that it is already in their backyards. Many well-meaning citizens cannot personally identify with the problem and therefore do not recognize the proposed facility as a solution to their problem (their contaminated drinking water). There is no unbiased evidence for them to recognize the proposed facility as anything other than an additional problem. Hazardous waste assessments performed by local governments can provide the evidence needed to justify the establishment of facilities as a solution to a serious problem faced by constituents of locally and state elected officials.
- Q7: Is this proposed local government solution useful only for Florida or does it have applicability for the rest of the nation?
- A7: We have examined the hazardous waste problem in Leon County, Florida and other areas of Florida and the nation. Hazardous waste is generated and mismanaged in virtually every county in the U.S. and from every sector of the U.S. economy.

After discussions with U.S. EPA regulatory officials, it was indicated that most state level regulatory programs are similar in terms of their inability to deal with the smaller quantity generators, as well as their recognition of the need for increased numbers of hazardous waste management facilities. The problems facing the nation regarding smaller quantity generators and the need for additional hazardous waste facilities can best be resolved in the context of local government involvement. In this regard, the local government solution is applicable to every state in the nation.

JOHN SCHROEFFER, CHAIRMAN, ALACHUA COUNTY COMMISSION

Question 1. Are you familiar with the Leon County Hazardous Waste Assessment?

Answer. Yes.

Question 2. In your opinion, would other counties, including Alachua County, benefit by conducting similar work?

Answer. Yes.

Question 3. What role should local governments play with regard to hazardous waste issues?

Answer. Best place to assess problem and provide education on dangers to citizens.

BERNARD WINDHAM, CITIZEN AFFECTED BY HAZARDOUS WASTE

Question 1. Is it your belief that hazardous waste assessments such as the one conducted in Leon County, Florida are a valuable part of the overall state program?

Answer. Yes; very important—see my testimony for discussion.

Question 2. Could such an assessment have helped to prevent your problem?

Answer. Yes; if it had been done prior to the contamination problem; especially since it was under the oversight of Department of Transportation.

Question 3. What is the extent of your personal financial burden from the problems that your family has experienced with hazardous waste?

Answer. Considerable, this question was answered directly in a question from Representative Lewis after my testimony and is included here. The cost has already been more than \$50,000 and the majority of the cost is still in the future.

LARRY HYDE AND AL SMITH, U.S. EPA, REGION IV, ATLANTA, GA. (OFFICE OF EMERGENCY RESPONSE)

Question 1. Your work deals with emergency response to chemical spills and removal or cleanup actions.

Answer. Yes.

Question 2. Do you feel that there is a strong need to have a coordinated planning effort by Federal, State, and local governments in order to effectively respond to these problems?

Answer. By all means! That is the only way.

Question 3. Is the role that local officials play an important one?

Answer. Very much so.

Question 4. Could the same results be accomplished by enlarging the role of State and Federal authorities without providing a role for local government?

Answer. In my opinion, no.

Question 5. Does it make sense for local governments to have a role defined for them at the Federal and State level with regard to both emergency response and other hazardous waste problems, especially with regard to preventative measures?

Answer. Yes; I speak to that in the testimony.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET
ATLANTA, GEORGIA 30385

August 29, 1983

Dr. James Green
Subcommittee on Natural Resources
Agriculture Research & Environment
Room 388, House Office Bldg., Annex #2
U. S. House of Representatives
Washington, D. C. 20515

RE: Testimony before Messrs. Fuqua,
Scheuer, Mackay (May 16, 1983)

Dear Dr. Green:

I have made only minimal changes in the draft, pencilled in minor changes in the testimony context, and penned in simple answers to Witness Questions 1-5. Additionally the five single-spaced questions, 3, 4, 5 of which I believe should be answered by the State of Florida except to say Florida is able to come up with their 10% share on any of their 25 sites. Fairbanks is a situation primarily being handled by Florida and I have enclosed a brief report from my staff concerning that site.

Answers to 1 and 2 are as follows:

1. Superfund's \$1.6 billion should go some distance in cleaning up Florida's 25 sites. It is not know at this time if we can complete those 25 sites with the \$1.6 billion we have. The national complexities of funding are beyond this respondent.
2. 25 sites identified in Florida were considered to pose a threat to health and/or the environment. These are now listed on the Proposed National Priority List. In addition, EPA and Florida DER have submitted hazard ranking scores pertaining to another 15 sites for quality assurance evaluation. If the data on which these scores were based passes quality assurance, these sites will be considered for inclusion on the first update of the National Priority List.

Sincerely,

Al Smith

Enclosures

AUG 16 1983

AAW-EM

Mr. J.C. Kraft, Chief
Bureau of Environment
Florida Department of Transportation
Haydon Burns Building
605 Suwanee Street
Tallahassee, Florida 32301-8064

Re: Florida DOT Disposal Site, Fairbanks, Florida
EPA I.D. Number FLD980799050

Dear Mr. Kraft:

This letter is to acknowledge the receipt of the RCRA Part A application your department submitted for the disposal site formerly used by your department near Fairbanks, Florida, and to clarify subsequent conversations and future courses of action. The Part A you submitted provided us with the initial information on the site that we requested. However, since the Part A was not sent prior to November 19, 1980 in accordance with §3010 and §3005(e) of 42 U.S.C. §6925 the facility cannot qualify for interim status.

On July 14, 1983, Mr. Bob Glasson of Dames and Moore discussed the facility and the closure/post closure activities with Mr. Michael Hartnett of my staff. At that time Mr. Glasson indicated that the Part A information was going to be revised to list the facility as a container storage facility (process code S01) instead of a landfill (D80). He was advised that we disagreed with that change but that we would wait for the revision to respond. That revision has not been received to date.

On August 8, 1983, Mr. Craig Diltz of the Florida Department of Environmental Regulation (DER) telephoned Mr. Hartnett and indicated that the Part A process code would not be changed and requested a clarification on how the parties involved should proceed from this point to implement further corrective action at the site without additional delay. Mr. Hartnett advised him of the following course of action:

- Closure of the facility should be conducted in accordance with 40 CFR Part 265 Subpart G and equivalent state regulations. Certification of the closure activities should be sent to the state and a copy sent to EPA, Region IV.
- A post closure plan should be submitted to the state and a copy sent to EPA, Region IV, for review and approval by both agencies.

The post closure plan should include all necessary groundwater assessment studies and corrective actions necessary to protect public health and the environment. The corrective action(s) may include a groundwater treatment system.

- EPA, Region IV, will issue an Administrative Order upon approval of the post closure plan to allow full implementation of the plan since the facility does not qualify for interim status.

If we can be of any further assistance in this matter please contact Mr. Hartnett in the Waste Engineering Section at 404/881-3433.

Sincerely yours,

James H. Seabroough, Chief
Residuals Management Branch

cc: Mr. Doug Dutton,
Florida Department of Environmental Regulation
Jacksonville, Florida

Mr. Robert W. McVety
Florida Department of Environmental Regulation
Tallahassee, Florida

bcc: Andy Kromis, WCS
Rich Parrascualo, SCC, Superfund ✓
Rita Ford, WES
Craig Diltz, FL DER, Tallahassee
Thomas W. Devine, ASWMD

Hartnett:tdb:8/10/83:3433

15(38)

MAY 20 1983

Florida DOT Waste Disposal Site, Gainesville, Florida

Florida Project Officer

AJ Smith, Chief
Emergency and Remedial Response Branch

The Florida Department of Transportation has disposed of approximately 1000 drums of volatile organics in a pit near Gainesville, FL resulting in the possible contamination of groundwater. The Florida DOT has already arranged with the DOT for the removal of the drums and the only remaining snag appears to be the need for a RCRA permit to construct recovery wells.

According to Andy Kromis of the Waste Compliance Section, Mickey Hartnett of the Residuals Management Branch is handling the RCRA permitting aspect of this site, and since disposal occurred well past November 1980, EPA should allow tracking of this site to be continued by RMB. There will be a conference call, Friday, May 20 from the DER, DOT and their consultant to discuss submission of Part A and closure/post-closure plans. Nancy Redgate of Alan Bartlett's section will participate in this call to comment on the proposed remedial aspects of this site. Therefore, SRBS will not take any active involvement at this time.

Richard Ferrazzuolo

FERRAZZUOLO:cmh:2234:5/20/83:lex no. 1:michelle v

RAYMOND HARBISON

1. What are some of the chronic health effects that may result from typical small quantity generator waste, for example, heavy metals, chlorinated solvents, and other synthetic organic chemicals, etc.?

The chronic diseases that can result from small quantity generator wastes are the same as those that can result from larger generators. Cancer, birth defects, mutations, and specific organ injury can all be produced by these wastes. Heavy metals, chlorinated solvents, and synthetic organic chemicals can produce chronic diseases. Small quantities of highly toxic wastes are as dangerous as large quantities of lower toxicity wastes.

2. Can you provide an example of some common compounds which might produce significant health effects at very low doses?

Some common compounds which might produce significant health effects at very low doses are dioxin, cyanide, parathion, arsenic. These compounds include metals, chlorinated organics, and synthetic organic chemicals.

GEORGE SHELDON

1. What are the major issues facing Florida and the nation with regard to hazardous waste?

There are essentially three problems which I believe must be remedied in Florida and nationwide if we are to preserve our present sources of quality water.

First, funding to clean up existing uncontrolled hazardous waste sites is imperative. The funds simply are not sufficient to properly address this problem. There has to be a greater commitment by Congress to properly fund "super-fund" and to insure that illegal dumpers pay to clean up their spills. Obviously, enforcement by EPA must be stepped up so those illegal dumpers will swiftly be prosecuted.

Second, illegal dumping must be stopped with proper management in the future. Hopefully, other states will follow Florida's lead and mandate that all generators (including small quantity generators) of hazardous waste and their management practices be identified. Once we know the volume and types of waste generated this state's new siting mechanisms should insure that a proper means of disposal will be provided at a reasonable cost to generators.

It is significant to note that all state programs should be modified in order to provide a program which can deal with each state's unique environmental circumstances. For instance, Florida has virtually eliminated the use of hazardous waste landfills due to the permeability of our soils and the karstic nature of our terrain. However, in Alabama, due to their clay impervious surface, this ban on landfills is not appropriate. My point is that a certain amount of flexibility should be maintained by Congress (as now exists in RCRA) to allow for these unique circumstances.

Finally, another problem is that very few waste generators are provided sufficient incentives to reduce their waste volume. At both the national and the state level, this avenue of waste reduction should be vigorously pursued.

2. How does your legislation differ from last year's bill?

My bill was not a comprehensive package dealing with water quality. The primary emphasis of the 1982 legislation was to remove total control by local governments to site hazardous waste facilities. Second, the bill raised revenues through an increase in the tax on medium and large size generators charged in Florida. The money generated would have been used to improve Florida's DER program with regard to hazardous waste management including more funding for clean-up. Third, the bill attempted to raise the penalties for illegal dumpers. Finally, the bill cleaned up the 1980 Hazardous Waste Act by attempting to clear up administrative pitfalls created by this act.

This year's water bill, even though different means were used, attempts to accomplish these four goals. For instance, instead of using the hazardous waste generator tax to increase revenues for clean-up of hazardous waste sites, the current bill creates a twelve million dollar trust fund which is replenished by a two cent per barrel tax on oil once the fund dips below three million dollars.

In addition to these goals mentioned above, this year's bill goes much further. First, it requires that a local program be instituted to insure that all generators (including small quantity generators) are promptly disposing of their waste. Hopefully, local programs will be instituted nationwide that allow the public to become more aware of their hazardous waste situation. In addition, the bill mandates that all state agencies promptly plan for proper waste disposal. Finally, the bill provides that the state establish a hazardous waste facility. The legislature felt that a major multi-purpose facility must be built in the near future in order for generators to properly dispose of their waste. Currently, no in-state treatment or disposal facilities exist and all generators must ship their waste out of state. With transportation costs of waste escalating, an alternative must be provided.

3. Is this approach better or different?

The approach is better simply because it is more comprehensive. The legislature learned a great deal during the interim and this issue was brought to the forefront during the past session. With this being the major issue of the session, much more could be accomplished relative to the 1982 session.

SUZI RUHL

LEGAL ENVIRONMENTAL ASSISTANCE FOUNDATION
2330 HIGHLAND AVENUE SOUTH • BIRMINGHAM, ALABAMA 35205 • 205-324-0832



October 8, 1983

RESPONSE TO WITNESS QUESTIONS

- #2. Regarding legal barriers facing local governments with their involvement in the hazardous waste management process, the issue is one of pre-emption. This potential conflict can exist between the federal and state governments, and also between the state and local governments. The federal law, Resource Conservation and Recovery Act (RCRA), allows states to set more stringent requirements for hazardous waste activity, and also delegates siting decisions to the states. Therefore, for the most part, the federal law does not impede local government involvement.

The potential barriers facing local governments in the hazardous waste area are found in state laws. Some state laws give exclusive control over hazardous waste to state agencies, while others allow for local government involvement. The validity of local government action depends on the degree to which that action is in conflict with state law; on whether the state has exclusive occupation of the field, and; on the existence of express pre-emption by the state.

Generally, the field of pre-emption law is inconsistent and unpredictable. Resolution depends on the special features of each case. Therefore, local government involvement in the hazardous waste issue is appropriate, as long as state laws are considered in defining appropriate activity.

CAROL BELLAMY, MAYOR OF TALLAHASSEE, FLA.

1. The Tallahassee/Leon County Area is relatively non-industrialized, yet the city and county have taken a progressive step toward assessing the nature of hazardous waste related activities in the community.

2. Why is this work being done?

3. In what way will be results of this work be useful in helping the city and county plan for growth?

4. Do you think this type of assessment would be useful for other counties as well?

5. Communities in states with high population growth can anticipate an increased burden in the challenge to effectively manage this growth.

6. Would you rank hazardous waste concerns as an important growth management challenge?

7. Is the Leon County Sanitary Landfill vulnerable to accepting smaller quantity generator hazardous wastes?

8. Is the Leon County Sanitary Landfill typical of landfills operated throughout Florida? Throughout the nation?

ANSWERS TO WITNESS QUESTIONS

1. and 2. The Tallahassee-Leon County area is relatively nonindustrialized. Yet the City and County have taken a progressive step toward assessing the nature of hazardous waste related activities in the community. Why is this work being done?

See the testimony at page 139.

3. In what way will the results of this work be useful in helping the City and County plan for growth?

We will identify hazardous waste generators that need improved disposal sites or techniques. Pollution problems in our environment would certainly be a deterrent to newcomers. Perhaps there are steps we can take locally to prevent similar situations from occurring.

4. Do you think this type of assessment would be useful for other counties as well?

Definitely. The sooner waste problems are identified and addressed, the better it is for solving them.

5. and 6. Communities in states with high population growth can anticipate an increased burden in the challenge to effectively manage this growth. Would you rank hazardous waste concerns as an important growth management challenge?

See the testimony at page 155.

7. Is the Leon County Sanitary Landfill vulnerable to accepting smaller quantity generator hazardous wastes?

I don't know.

8. Is the Leon County Sanitary Landfill typical of landfills operated throughout Florida? Throughout the Nation?

I don't know.

APPENDIX II

ADDITIONAL MATERIAL SUBMITTED FOR THE RECORD

COMMITTEE ON SCIENCE AND TECHNOLOGY U.S. HOUSE OF REPRESENTATIVES WASHINGTON, D.C. 20515

CHARTER

Hearing on Hazardous Waste Management

Subcommittee on Natural Resources,
Agriculture Research, and Environment
of the
Committee on Science and Technology

May 16, 1983; Cabinet Meeting Room
The Capitol, Tallahassee, Florida

I. OBJECTIVES OF THE HEARING

1. To examine the role of state and local governments in the overall effort to regulate hazardous waste.
2. To explore the various options for the location of hazardous waste management facilities.
3. To review the impact of regulatory exemptions for small quantity hazardous waste generators.

II. BACKGROUND

The State of Florida contains twenty-five abandoned or closed hazardous waste dump sites eligible for cleanup under the federal "superfund" law. Only three other states contain more sites of this nature. Moreover, the Environmental Protection Agency (EPA) has found at least 15,000 hazardous waste dump sites across the Nation and many of these are found in Florida. One such site, currently being investigated, is located in Fairbanks.

Hazardous waste management is not just a problem involving abandoned or closed sites, because these wastes are currently being produced. EPA has estimated that Florida generates almost one million tons of hazardous waste annually.

The Resource Conservation and Recovery Act (RCRA) which was implemented in 1980 contains legislation to regulate the management practices of handlers of hazardous waste. It is now appropriate to reexamine the effectiveness of the implementation of RCRA, and also to evaluate suggested measures to amend RCRA to improve hazardous waste management programs nationwide. Despite the existence of federal and state hazardous waste regulatory efforts, hazardous waste mismanagement continues throughout the Nation. While federal and state efforts are concentrating on cleaning up major uncontrolled sites (Superfund) and regulating larger hazardous waste generators, new sites may be developing in sanitary landfills and in other locations due principally to smaller quantity generators.

In order to implement effective measures to improve federal and state programs, it is essential to fully understand the circumstances facing both the regulators and the regulated community. In addition, the issues concerning the small quantity generator exemption and the siting of hazardous waste management facilities need to be understood and resolved. The problems resulting from hazardous waste mismanagement and the problems associated with hazardous waste regulation are similar across the individual states. In many of the sunbelt states, population growth is high and economic profiles are such that hazardous waste generators tend to be generally smaller and hence a larger number of generators are subject to the small quantity generator exemption. In addition, these sunbelt states generally have environments and older populations that are both relatively more vulnerable to the adverse impacts of hazardous waste mismanagement.

III. HEARING

The overall objectives of the hearing are to identify areas of deficiency within RCRA and examine ways to strengthen these areas. A more specific objective will be to evaluate the effectiveness of defining a role for local government in the federal, state, and local efforts to deal with the small quantity generator problem and the facility location problem. To help perform this evaluation, testimony will be received by various individuals regarding the innovative program that is proposed for the state of Florida.

HAZARDOUS WASTE PRODUCED BY SMALL QUANTITY GENERATORS

- Definition: Small quantity hazardous waste generators are those generators that produce less than 1000 kilograms (kg) of hazardous waste per calendar month.*
- Situation: These generators are legally exempt from certain regulations regarding the manifesting; the packaging, labeling and marking; and the record keeping, and annual reporting of their hazardous wastes (parts 262-265 of the May 19, 1980 Federal Register). These generators must make a determination regarding whether their wastes are hazardous or non-hazardous. If hazardous, they must either treat or dispose of the wastes in an on-site facility, or ensure delivery to an off-site, permitted treatment or disposal facility.

LAWS AFFECTING SMALL QUANTITY GENERATORS

- Federal: RCRA Rules and Regulations Part III, Section 261.5 Special requirements for hazardous waste generated by small quantity generators. May 19, 1980 Federal Register.
- State: Federal Rules adopted by reference under: Section 403.8055 (F.S.), Department adoption of federal standards.

ANALYSIS OF THE SMALL GENERATOR EXEMPTION

In the RCRA regulations, EPA recognized that the principal focus of the regulatory program should be directed towards effectively controlling the hazardous waste generated by the larger sources of hazardous waste.

*1000 kg = 2205 pounds (approximate) = 1 metric ton of non-acutely toxic hazardous waste.

The principal element in this issue is how to balance the need to protect human health and the environment from the adverse impact of potential mismanagement of small quantities of hazardous waste with the need to hold the administrative and economic burden of management of these wastes under RCRA within reasonable and practical limits (43 FR 58970).

Federal regulations and Florida hazardous waste laws have provisions that exempt small quantity generators from certain regulations. These exemptions are partially justified by the figures shown in Table 1. Nationally, 91 percent of the generators produce approximately 1 percent of the hazardous waste. This exemption reduces the regulatory burden dramatically while leaving an estimated one percent of the waste "uncontrolled." An independent estimate for the entire state of Florida shows similar relationships in Table 2.

- o It should be noted that the small generator exemption is based exclusively on quantity. This is so because data does not exist to date to allow for a quality exemption. The quality or concentration of a hazardous waste is important when setting a de minis or exemption level with respect to regulatory burden and public health trade-offs - these de minis levels are unknown or difficult to calculate with regard to toxicological effects for some of the acutely toxic materials.
- o Secondly, it should be noted that these federal and state exemptions represent a regulatory gap that should be addressed by local governments. This is particularly true when small quantity generators in the light to medium industrialized counties in Florida, represent a very high percentage of both the total generators and hazardous waste.

TABLE 1
NATIONAL DATA ON SIZE DISTRIBUTION
OF HAZARDOUS WASTE GENERATORS, 1980

<u>Number of Generators</u>	<u>Percent of Total</u>	<u>Amount of Waste/ Metric Tons</u>	<u>Percent of Total</u>
760,000	(100)	60,000,000	(100)
40,000 ^a	(5)	58,800,000	(98)
695,000 ^b	(91)	600,000	(1)

^a These generators each produce more than 5,000 kg/month.

^b These generators each produce less than 1,000 kg/month.

NOTE: The generators represented in (a) and (b) are subsets from the total of 760,000 generators nationwide estimated in 1980.

SOURCE: May 19, 1980 Federal Register, p. 33104.

TABLE 2
FLORIDA DATA ON SIZE DISTRIBUTION
OF HAZARDOUS WASTE GENERATORS, 1980

<u>Number of Generators</u>	<u>Percent of Total</u>	<u>Amount of Waste/ Metric Tons</u>	<u>Percent of Total</u>
848 ^a	(100)	128,795	(100)
24 ^b	(3)	22,335	(18)
512 ^c	(60)	1,336	(1)

^a The Florida generators were those surveyed in 1977. They are not the total number of hazardous waste generators in Florida.

^b These are large hazardous waste generators that can environmentally manage their wastes on site.

^c Small, exempt generators from surveyed firms.

SOURCE: Technical Document for the Final Report of the Governor's Hazardous Waste Policy Advisory Council of Florida, 1982.

EXCERPTS FROM RCRA REGULATIONS
REGARDING SMALL QUANTITY GENERATORS

The types of business activity generating small quantities of hazardous waste differ markedly from those generating large quantities of hazardous waste. In contrast to large quantity generators, which are almost entirely from the manufacturing sector, over 89 percent of the small generators (less than 1000 kg/month) are from the non-manufacturing sector. These generators are from such diverse sectors as construction, special trade contractors (e.g. plumbers, electricians, secondary schools and local transportation systems). Gasoline service stations and automobile repair garages (for wastes other than waste lubricating oil) comprise nearly 30 percent of these non-manufacturing small generators of hazardous waste.

EPA believes the approach adopted will allow EPA and the States to initially focus implementation and enforcement of their regulatory programs on those generators of hazardous waste who are presently producing approximately 98 percent of all hazardous waste. The Agency's (EPA) basis for this decision is the current lack of sufficient administrative resources to allow the Agency and the States to effectively regulate all hazardous waste.

"SUPERFUND" SITES IN FLORIDA**Florida****FL****ALPHA CHEMICAL CORPORATION****Galloway, Florida**

Alpha Chemical Corporation operates a polyester resin manufacturing plant 2 miles north of Lakeland in Galloway, Florida. The groundwater near the plant's wastewater pond has been contaminated with organic compounds such as 1,4-dioxane. This groundwater is hydraulically connected to the aquifer which supplies water to Lakeland and other nearby communities.

At the encouragement of Florida officials, Alpha Chemical has modified its process and upgraded its wastewater treatment process to control most of the discharge of pollutants. Groundwater quality monitoring is continuing, as are negotiations between Alpha Chemical and State representatives with respect to further monitoring and remedial actions.

This site was on the Interim Priority List of 160 sites.

PARRAMORE SURPLUS
Mt. Pleasant, Florida

The Parramore Surplus Site, located near Mt. Pleasant, Florida, occupies approximately twenty-five acres of land on which surplus military equipment is stored. A Florida Department of Environmental Regulation (DER) inspection revealed drummed hazardous waste stored in four areas on the site. Subsequent soil and waste sampling identified polychlorinated biphenyls (PCBs), solvents, and cyanide in some of the drums. The Florida DER is planning a groundwater quality study in the very near future.

The Florida DER has accepted a waste storage and consolidation plan, submitted by the operator, which will help prevent a potential release of the drummed waste to the environment. The U.S. Environmental Protection Agency and the Florida DER will monitor the implementation of the storage and consolidation plan.

SAPP BATTERY SALVAGE
Cottdale, Florida

Sapp Battery Salvage is an inactive facility that recovered lead from spent lead-acid batteries. The site consists of approximately 30 acres, located north of Steele City Bay and State Highway 280, between Alford and Cottdale, Florida. The area is sparsely populated.

Elevated levels of lead, zinc, and sulfuric acid have been detected in nearby drainage culverts, Little Dry Creek, and Steele City Bay. Dead and discolored vegetation, as well as strong sulfurous odors, have been noted along the drainage route from the site. Groundwater pollution has not been documented.

The U.S. Environmental Protection Agency (EPA) conducted an emergency response cleanup action in August, 1980, which resulted in a temporary restoration of pH levels similar to background levels downstream from Sapp Battery Salvage.

In September, 1982, EPA approved funding for a hydrogeological and sampling investigation. The State of Florida has filed a civil action suit to recover the costs of cleanup, damages incurred, and expenditures made in the course of the investigation.

This site was on the Interim Priority List of 160 sites.

AMERICAN CREOSOTE WORKS

Pensacola, Florida

American Creosote Works is an inactive wood treating facility located in Pensacola, Florida, approximately one-quarter mile north of the confluence of Bayou Chico and Pensacola Bay. The facility treated wood with creosote and pentachlorophenol (PCP) from the early 1900s to late 1981 or early 1982. PCP-contaminated wastewater was discharged into two unlined 80,000-gallon percolation ponds.

In February, 1981, the U.S. Geological Survey initiated a continuing survey which indicated the presence of phenols in the groundwater associated with American Creosote Works. No potable water supply wells are within the known zone of contamination.

In March 1982, American Creosote sold all the equipment at its Pensacola facility and has since filed for bankruptcy under Chapter 11 of the Federal Bankruptcy Act. Although the Pensacola facility is closed, the Florida Department of Environmental Regulation has negotiated a consent order with American Creosote Works requiring restoration of the discharge areas and installation of on-site monitoring wells.

This site was on the Interim Priority List of 160 sites.

BROWN WOOD PRESERVING

Live Oak, Florida

The Brown Wood Preserving facility in Live Oak, Florida, is located south of U.S. Highway 90 on Gold Kist Boulevard. This 29-acre site is an abandoned wood treatment plant which operated from 1946 until 1977, using creosote and pentachlorophenol in its processes. Wastewater was stored on-site in a 5-acre surface impoundment, which currently contains an estimated 25,000 cubic yards of phenolic wastes. An additional one-acre area of apparently contaminated soil exists around the impoundment.

The site is surrounded by residences using private drinking water wells and by a wetland which apparently is being impacted by wastes migrating from the site.

The Florida Department of Environmental Regulation is currently assessing the results of sampling of site groundwater conditions performed earlier this year.

COLEMAN-EVANS WOOD PRESERVING COMPANY
Whitehouse, Florida

The Coleman-Evans Wood Preserving Company is located on Celery Avenue in Whitehouse, Florida, approximately 8 miles west of Jacksonville. From 1950 until the present, the Coleman-Evans facility has treated wood with pentachlorophenol (PCP). Investigations have documented shallow groundwater contamination by PCP in the residential area adjacent to the site. Local residents depend on private wells for their drinking water, and at this time there is no public water supply available.

The U.S. Environmental Protection Agency investigated the site in 1980. Groundwater monitoring wells have been installed on the site, and currently all wastewater from the plant is being contained.

This site was on the Interim Priority List of 160 sites.

DAVIE LANDFILL

Davie, Florida

The Davie Landfill (listed on the Interim Priority List as the Broward County Solid Waste Disposal Facility), has been owned and operated by Broward County, Florida, since 1971. The facility includes a 30-acre asphalt-lined sanitary landfill, an 80-acre trash fill, and a 10-acre wastewater sludge lagoon.

The primary concern at this site is contamination of the Biscayne Aquifer, a designated sole source water supply, by leachate from the lagoon. Leachate has affected groundwater quality 1,300 feet down-gradient of the lagoon to a depth of 35 feet. Above-background levels of ammonia, lead, chromium, iron, and arsenic have been detected in monitoring wells near the lagoon. All of the residents and commercial establishments in this area west of the City of Ft. Lauderdale depend on the Biscayne Aquifer for potable water.

The County has imposed strict operational controls. A number of studies to document the extent of contamination have been performed by the County and its consultants, and by the Florida Department of Environmental Regulation (DER) and the U.S. Geological Survey. A series of 23 monitoring wells have been installed within the groundwater contamination plume or plume-influenced areas. The design of the monitoring system allows water quality to be sampled through the entire depth of the aquifer and provides an early warning of plume encroachment on drinking water supply wells.

Analyses to date show that no pollutants are present at levels which would violate water quality standards or pose any threat to human health, and that contamination of a drinking water supply is not imminent. Continued sampling is planned and will be closely reviewed by Broward County, the Florida DER, and the U.S. Environmental Protection Agency.

FLORIDA STEEL CORPORATION
Indiantown, Florida

Florida Steel Corporation's facility, located on State Road 710 in Indiantown, Florida, uses an electric furnace process to melt scrap metal and produces concrete reinforcement rods and square bars of steel. The manufacturing process generates emission control dust which is listed as a hazardous waste by the Resource Conservation and Recovery Act. Some of the dust has been spread over the facility's roads, and a total of about 75,000 cubic yards has been deposited on the southern portion of the site in waste piles. In November 1980, Florida Steel changed this disposal practice and now collects the emission control dust in three baghouses and moves the material on tractor trailer trucks to a chemical plant in South Carolina for recovery of lead and zinc.

One of the concerns with this site is that the heavy metals in the emission control dust waste piles may be migrating into the shallow groundwater which is used for drinking water. Florida Steel's 150 employees are provided drinking water from a well on the plant site, and the Indiantown public water supply is from a group of shallow wells located within 3 miles of the site. Another concern is that potentially contaminated surface runoff or leachate may be degrading local surface waters, some of which are used for crop irrigation.

The Florida Department of Environmental Regulation has recently investigated the site, and preliminary results indicate that elevated levels of lead and cadmium are present.

GOLD COAST OIL CORPORATION

Miami, Florida

The Gold Coast Oil Corporation reclaimed solvents at a facility located at 2835 S.W. 71st Avenue, Miami, Florida. The property is owned by the Seaboard Coast Line Railroad Company and was leased to the Gold Coast Oil Corporation. Located on the two-acre site were 2,500 corroded and leaking drums containing sludge from the solvent distilling operation, contaminated soils, and paint wastes. Additionally, large storage tanks of hazardous waste were located on the site. Shallow groundwater at the facility was sampled by the U.S. Environmental Protection Agency (EPA) and found to be contaminated with lead, zinc, and various organic pollutants. This contamination was of major concern because the Biscayne Aquifer is the principal source of drinking water in this section of Florida.

Seaboard Coast Line has agreed to clean up the site. Gold Coast Oil was evicted from the property, and the voluntary clean up was completed in August 1982, with EPA personnel present to monitor the activities.

This site was on the Interim Priority List of 160 sites.

HOLLINGSWORTH SOLDERLESS TERMINAL COMPANY
Ft. Lauderdale, Florida

The Hollingsworth Solderless Terminal Company in Ft. Lauderdale, Florida, manufactures small, solderless electrical connectors. In the manufacturing process, the connectors are cut and formed out of copper sheets, annealed, degreased, and then electroplated with tin or nickel. Hollingsworth's past waste activities raise two major concerns. The first was the injection of trichloroethylene, oil, grease, and dyes into a 100-foot-deep on-site well. The second major concern involved the discharge of electroplating wastes into an on-site drainfield. In addition to these two disposal methods, wastes periodically entered the ground through spillage or other smaller drainfields. These on-site waste disposal activities occurred from approximately 1976 until 1981.

Several public water supply wells in the vicinity of the Hollingsworth Site draw water from the shallow aquifer (Biscayne Aquifer). Over 30 public water supply wells in the Executive and Prospect Well Fields (Ft. Lauderdale Utilities Department) are located between 0.25 and 2.5 miles west of Hollingsworth. The Broward County water system also has two wells located within 0.25 miles of the site.

Some recent efforts to correct the problem or characterize the extent of contamination include backpumping the injection well, installation of 16 on-site monitoring wells, soil sampling, a groundwater gradient study, and sampling of public water supply wells. Various levels of contamination were found in some of the monitoring wells, water supply wells, and soil samples.

The U.S. Environmental Protection Agency is presently developing a Remedial Action Master Plan on the site. This site was on the Interim Priority List of 160 sites.

KASSAUF-KIMERLING BATTERY DISPOSAL

Tampa, Florida

The Kassauf-Kimerling Battery Disposal site is located east of 58th Street and north of Columbus Drive in Tampa, Florida. The site contains approximately 4-feet of battery casings from a local battery cracking operation, used as fill in a marshy area adjoining a borrow pit lake.

High concentrations of lead have been detected in the surface waters near the site, and low concentrations of lead have been detected in on-site monitoring wells. There are an estimated 1,500 wells within a 3-mile radius of the site, and surface drainage from the site runs toward a private fish farm and the nearby Palm River.

This site appeared on the Interim Priority List of 160 sites as Timber Lake Battery Disposal.

MIAMI DRUM SERVICES

Miami, Florida

Miami Drum Services is an inactive drum recycling facility located in a predominantly industrial area of Miami, Florida. As many as 5,000 drums of various chemical waste materials (including corrosives, solvents, phenols, and toxic metals) were observed on the site while the company was operating. Surface spills and percolation of contaminated wastewater have saturated the soil at this facility. Contamination of groundwater (Biscayne Aquifer) with various toxic organic solvents and heavy metals has been documented by analyses of samples taken from on-site monitoring wells. Miami Drum Services is situated approximately 750 feet away from the Medley well field, which extracts drinking water from the Biscayne Aquifer during peak demand periods.

A local court order required the facility to cease operations in June, 1981, as the result of county action. The Miami Drum Services Site was found to be in the path of the new mass transit system for Miami; therefore, Dade County authorized use of transportation funds to clean up the site. By January, 1982, the source of contamination had been removed through the excavation of 8,500 cubic yards of contaminated soil and treatment of one-half million gallons of groundwater. Additional groundwater studies are scheduled to begin in the fall of 1982.

The Miami Drum Services Site, the Northwest 58th Street Landfill, and the Varsol Spill Site were collectively designated on the Interim Priority List of 160 sites as the Biscayne Aquifer Site in order to emphasize the threat to the regional water supply. The U.S. Environmental Protection Agency initiated remedial planning activities early in 1982.

MUNISPORT LANDFILL
North Miami, Florida

Munisport Landfill is a large, inactive sanitary waste disposal facility located at 152nd Street and Biscayne Boulevard in North Miami, Florida. The landfill was operated for 6 years by a lessee of the City of North Miami, and during these years it is suspected that the landfill received hazardous wastes. A few drums of hazardous wastes have been found on the top of the fill. Sampling conducted by the U.S. Environmental Protection Agency (EPA) found low concentrations of various organic pollutants in leachate originating from the landfill, and elevated levels of lead in several perimeter monitoring wells. The concern of this site is twofold: the proximity of this site to two public drinking water supply well fields; and the potential impact on the water quality of Biscayne Bay, which is currently part of Florida's water quality improvement program and is a Federally designated critical habitat for the Florida Manatee.

The landfill ceased operations in 1980, and currently the State of Florida is working to assure that proper closure measures are used to secure the landfill.

NORTHWEST 58TH STREET LANDFILL

Hialeah, Florida

The Northwest 58th Street Landfill is a large, active municipal landfill covering a one-square-mile area near the western outskirts of the City of Hialeah, Florida, along the east edge of the Everglades. This facility, which has been operated continually since 1952 by Dade County, receives as much as 3,000 tons per day of municipal solid waste. Groundwater pollution has occurred from landfill leachate and includes heavy metals such as arsenic, cadmium, chromium, and lead, as well as some phenols and halogenated volatile organic compounds. Two major public water supply wells are located downgradient within three miles of the site.

The State of Florida has a civil suit pending against Dade County for failure to cease operations by August 1981 (as required by a 1979 consent decree). State and Dade County personnel are working together to develop a final closure plan for the facility.

The Northwest 58th Street Landfill, the Miami Drum Services Site, and the Varsol Spill Site were collectively designated on the Interim priority List of 160 sites as the Biscayne Aquifer Site to emphasize the threat to the regional water supply. The U.S. Environmental Protection Agency initiated remedial planning activities early in 1982.

PICKETTVILLE ROAD LANDFILL
Jacksonville, Florida

The Pickettville Road Landfill, located near Jacksonville, Florida, began operation on a limited basis in the early 1940s. Full-scale operation started in 1967 and continued until 1977. The landfill received all types of waste, ranging from household garbage to hazardous materials. Local residents have complained of runoff problems associated with the landfill, and leachate streams also have been reported. Groundwater samples taken from monitoring wells installed in the area have shown evidence of iron and chromium contamination. Some of the local private wells, serving approximately 1,000 people, have been sampled and found to be free of contamination. A public water supply is currently not available to residents in this area. The City of Jacksonville has installed additional monitoring wells around the Pickettville Road Landfill. The U.S. Environmental Protection Agency investigated the site in June 1981, and found groundwater contamination to a depth of 80 feet.

This site was on the Interim Priority List of 160 sites.

PIONEER SAND COMPANY
Warrington, Florida

Pioneer Sand Company, located on Sauflv Field Road, 5 miles west of Pensacola, Florida, is actively engaged in the mining of sand for commercial use. The company owns an inactive quarry of approximately 20 acres into which shredded auto parts, construction debris, and various industrial sludges and resins have been deposited. Two surface impoundments are also located on the site.

The Florida Department of Environmental Regulation (DER) and the U.S. Environmental Protection Agency detected the elevated levels of chromium, lead, and nickel in the on-site soils. A monitoring well installed by Pioneer Sand and one of the surface impoundments were found to contain elevated levels of chromium and lead. A well field for the City of Pensacola, which has a population of 67,000, is located within 3 miles of this site.

This site was on the Interim Priority List of 160 sites.

REEVES SOUTHEASTERN GALVANIZING CORPORATION
Tampa, Florida

The Reeves Southeastern Galvanizing Corporation, located on Highway 574 east of Tampa, Florida, manufactures galvanized fence wire using the hot dip process. Washwater and periodic dumping of rinse baths from this process produce an effluent with a low pH and high concentrations of iron, zinc, and chromium. Since the mid-1960s, this effluent has been discharged into two unlined percolation ponds on the property. Reeves Southeastern has recently installed an advanced wastewater treatment system to neutralize the acid and remove 90 percent of the heavy metals. Past operational practices have caused heavy metal contamination of both groundwater and surface water. County-owned water supply wells are located approximately 1 mile upgradient of the site, and numerous private wells lie within 3 miles of the site in all directions.

Hillsborough County issued a notice of violation and a compliance schedule to Reeves Southeastern in 1974, which resulted in the recently constructed advanced wastewater treatment system. Numerous studies to document the extent of contamination from this site have been conducted by private consultants for Reeves Southeastern, and by the State and County governments.

This site was on the Interim Priority List of 160 sites.

SCHUYLKILL METALS CORPORATION
Plant City, Florida

Schuykill Metals Corporation, an active facility located off South Woodrow Wilson Street in Plant City, Florida, recovers lead from storage batteries. Toxic leachate containing heavy metals and sulfuric acid has been discovered migrating from unlined impoundments into an adjacent drainage ditch which empties into Pemberton Creek.

Subsequent monitoring of the ground and surface waters in the site area has disclosed contamination by heavy metals and by ammonia, which was used to neutralize the plant's acid wastewater. Schuykill Metals has modified its operations to help eliminate some of these problems.

SHERWOOD MEDICAL INDUSTRIES

Deland, Florida

Sherwood Medical Industries is located at 2078 New Daytona Road, Deland, Florida. Over a period of four to five years, Sherwood Medical disposed of an estimated two tons of liquid and sludge, primarily contaminated with potassium chromates, into an unlined surface impoundment. The impoundment is constructed in the shallow sand aquifer which overlies karst limestones and dolomites of the Floridan Aquifer. Numerous private and community drinking water wells are located near the site, and no other sources of potable water are available in the area.

TAYLOR ROAD LANDFILL
Seffner, Florida

The Taylor Road Landfill, located in Seffner, Florida, at the intersection of Taylor Road and Interstate 4, is owned and was operated by Hillsborough County. This 42-acre landfill was intended to be used for the disposal of municipal refuse; however, unknown quantities of industrial waste are suspected to have been placed in the landfill, which was in operation from 1975 until February 1980.

Private wells surrounding the landfill are contaminated with volatile organic compounds. At one time, methane gas had migrated laterally from the landfill and had been detected at concentrations above the lower explosive limit near residences adjacent to the site. A gas collection system has corrected this problem. A well inventory documented the existence of 580 wells within a one-mile radius of this facility. Most of these wells are private water supplies; however, some wells are owned by commercial and institutional facilities.

The site has been investigated and sampled by the U.S. Environmental Protection Agency (EPA) on several occasions. Monitoring wells and gas vents have been installed. In October 1980, Federal civil action in U.S. District Court seeking injunctive relief was brought by the Department of Justice on behalf of EPA against the County. The Florida Department of Environmental Regulation has intervened in the suit, which is scheduled for trial in January 1983.

This site was on the Interim Priority List of 160 sites.

TOWER CHEMICAL COMPANY
Clermont, Florida

The Tower Chemical Company, located on Montverde Road in Clermont, Florida, manufactured pesticides from 1970 until November 1980. DDT was utilized as an intermediate compound, and waste from the operation was disposed of in a percolation pond. When rainfall caused periodic overflow of this pond, damaging an adjacent wetland, the company constructed a spray irrigation field to be used for waste disposal. The spray field was never permitted by the Florida Department of Environmental Regulation, and Tower Chemical was forced to cease operations after two court orders prohibited the use of the spray field and the use of DDT in the manufacturing process. The site is now owned by a real estate investment group and is no longer active. The percolation pond and a waste material burn site have contaminated surface water and groundwater. The population in this area of Lake County is approximately 1,000 and much of the land is devoted to orange groves.

The site was investigated by the U.S. Environmental Protection Agency (EPA) in August 1980. An electrical resistivity survey was conducted by a U.S. EPA contractor in April, 1982, to determine depth of contamination, but the results of this study were inconclusive. Sampling for toxic vapors in June 1982, yielded negative results.

This site was on the Interim Priority List of 160 sites.

VAR SOL SPILL SITE

Miami, Florida

An underground pipeline leak resulted in the discharge of approximately 1.6 million gallons of Varsol (a petroleum solvent) at the Miami, Florida, International Airport. Since the discovery of the spill in 1968, it is reported that the Varsol has been contained within the property boundary of the airport. Concrete walls were installed. These walls, along with an existing storm drain, contain the solvent, which floats on top of the Biscayne Aquifer. Approximately 2,000 feet from the containment barrier is the Miami Springs well field, which provides drinking water supply for the City of Miami.

Enforcement action was taken by Dade County at the time of the spill, and a removal effort was initiated by Eastern Airlines, owner of the material. The Varsol Spill Site, Miami Drum Services Site, and Northwest 58th Street Landfill were collectively designated on the Interim Priority List of 160 sites as the Biscayne Aquifer Site in order to emphasize the threat to the regional water supply. The U.S. Environmental Protection Agency initiated remedial planning activities early in 1982, and the first phase, which was a study to identify the sources of groundwater contamination, was scheduled for final review in August, 1982. Current plans at the Varsol Spill Site are to augment the existing groundwater monitoring system.

WHITEHOUSE WASTE OIL PITS

Whitehouse, Florida

The Whitehouse Waste Oil Pits Site are in the suburban community of Whitehouse, Florida, about 0.8 miles north of Interstate 10 and 8 miles west of Jacksonville in Duval County. The site was established in 1958 to provide a disposal area for waste oil and acid sludges generated by the Allied Petroleum Company, a waste oil recycler.

The seven oil pits, occupying approximately 5 acres, were abandoned in 1968. Jacksonville was responsible for partially completing a treatment and dewatering system at the oil pits in 1968. In 1976, the dike around one of the pits ruptured, spilling 200,000 gallons of wastes into wetlands along McGirts Creek. The U.S. Environmental Protection Agency (EPA) responded to the spill under section 311 of the Clean Water Act. During the cleanup, EPA sampled the contents of the pits, and the analyses revealed highly acidic water, sludges, and waste oil containing polychlorinated biphenyls (PCBs) and heavy metals.

The City of Jacksonville then began remedial action to dewater and stabilize the waste oil pits. The 1968 treatment system was modified to reduce the effluent PCB content to an acceptable level. The pits were then dewatered using this modified carbon treatment process. Next, the pits were filled and packed with various clays, drying materials, and fuller's earth. The treatment system was dismantled and drainage ditches were dug to control the groundwater in the area. Natural drainage now occurs through the drainage ditches surrounding the site. Final monitoring of the test wells and drainage effluents shows low level contamination with chlorinated hydrocarbons, heavy metals, and acids.

In June 1980, EPA granted funds to the Florida Department of Environmental Regulation for work on the site ditches and dikes while a remedial investigation and a feasibility study for additional cleanup are being completed.

This site was on the Interim Priority List of 160 sites.

ZELLWOOD GROUNDWATER CONTAMINATION SITE

Zellwood, Florida

Groundwater contamination of the surficial aquifer has been documented at a site near Zellwood, an unincorporated town in rural central Florida. The primary source of this contamination is a series of wastewater lagoons used by Drum Services, Inc. for disposal of rinse water. Drum Services, a drum recycling company, is adjacent to a liquid fertilizer manufacturer and a fresh produce wholesaler.

Arsenic and other metals have been found in groundwater samples collected from wells on the Drum Services property close to the disposal lagoons. The lagoons were taken out of service in November 1980. In August 1981, the lagoons were drained and cleaned, and the sludges were taken to a nearby landfill. Drum Services currently operates a permitted drum reclamation furnace; therefore, rinse water is no longer generated.

About 5,000 people use groundwater in Zellwood, which is one mile east of the site. Groundwater movement from this site is generally south to southeast.

Under the direction of the U.S. Environmental Protection Agency, geophysical studies were completed in July 1982. During August 1982, monitoring wells were installed and sampled.

This site was on the Interim Priority List of 160 sites.

62ND STREET DUMP
Tampa, Florida

The site known as 62nd Street dump in Tampa, Florida, is an abandoned borrow pit which has been filled with industrial refuse of different types, including auto scrap and battery casings from a local battery cracking facility. Immediately adjacent to the site is a private fish farm, and beyond the fish farm is an 80 acre marsh system which drains to a nearby lake. The primary concern with this site is that heavy metals and other industrial pollutants may be entering the local groundwater, which is used as a drinking water supply for the people of Hillsborough County.

The 62nd Street dump is currently being investigated by the Florida Department of Environmental Regulation.

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